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THE

MONTHLY FLORA,

OR

BOTANICAL MAGAZINE,

Comprising the History, Description,

AND

COLORED ENGRAVINGS,

OF

24 EXOTIC FLOWERS, 24 WILD FLOWERS OF AMERICA,
AND 12 TREES WITH FRUITS.

WITH AN INTRODUCTION ON THE PHYSIOLOGY OF PLANTS AND A TABULAR VIEW OF THE LINNÆAN SYSTEM.

ILLUSTRATED BY ENGRAVINGS.

VOL. I.

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TO

EPHRAIM HOLBROOK, ESQ.,

OF BELLEFIELD COTTAGE, NEW YORK,

THIS WORK ON HIS FAVORITE SUBJECT

IS RESPECTFULLY DEDICATED,

By the Editor.

PREFACE.

An illustrated work on Botany has been long wanted by the American Public, which without leaving the path of Science would be written in a popular and pleasing form; an object that this undertaking is intended to accomplish.

We purpose during its progress to give all the foreign as well as native plants of any celebrity, so that the numbers of this work will form in a few years the largest illustrated Botany in the world. A peculiar feature of it, and one which we hope the American public will be most pleased with, is the history and drawings of the Wild Flowers of our country.

Originality could not be attempted in a work like this, without injuring its value as a book of reference. The description and general properties however, will be confirmed in many instances by personal experience, more especially in a number of the exotics which the Editor has been fortunate enough to have had the advantage of studying in their native situations, and he expects to invest this branch of the subject with unusual interest.

At the completion of the volume we shall append a concise treatise on Botany, together with its history and physiology, and a tabular view of the whole Linnæan system, amply illustrated by engravings.

LITH. OF LEWIS & BROWN, 272 PEARL ST N.Y.

ROSA MULTIFLORA—JAPAN ROSE.

CLASS, ICOSANDRIA ; ORDER, POLYGNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx pitcher shaped, five-cleft, fleshy, contracted at the neck. Petals five. Seeds very many, hispid and affixed to the inner side of the calyx. SPEC. CHAR. Germs ovate. Germs and peduncles unarmed, villose. Stem and petioles prickly. Branches generally purple. Leaflets ovate. Flowers small and panicled.

There are 23 species of this plant depending on the color and size of the flower, whether it be single or double, and the shape of the leaf. In the groves and gardens of Japan and often in China, where they are as much admired as in their own country, they attain the magnitude of trees. Its flowers hang in irregular bunches with subdivided branches; this together with its hue will always ensure it a notice.

Belonging eminently to the ornamental instead of the useful, the rose tribe from time immemorial has received the homage of song, and been so long noticed and described that its native place is forgotten. They are of every shade and color. It sprang from the tears of Venus as she wept for Adonis, and was originally white and inodorous, but became colored and scented by a bowl of nectar staining it, which Cupid accidentally overthrew in Olympus.

A golden rose was formerly considered so honorable, that none but kings and princes were thought worthy either to give or receive

it. In olden times, the Pope on Good Friday used to consecrate one with great ceremony, and then gave it to some prince whom he wished to propitiate. Months before the solemn act of imparting peculiar sanctity to it was performed, negociations would be on foot, messengers journeying to the different courts, and every kind of intrigue resorted to by the agents of the respective monarchs, to obtain the rose for their masters. The flower itself was considered an emblem of the mortality of the body, and the metal of which it was composed of the immortality of the soul. History relates that the Roman emperors took this method of conferring honor upon their favorite generals, whom they allowed to add a rose to the ornaments of their shields; a custom which continued long after the Roman empire had passed away; and the vestiges of which may be traced in the armorial bearings of many of the eminent noble families of Europe, and perhaps caused its adoption as the emblem of England.

There are over nine hundred varieties of this flower, of every possible size and height, from a few inches to thirty feet. Some of them are evergreens, and run along the ground. It is only the smaller kinds that are much valued, either for scent or beauty. When distilled with water, a yellow butter rises to the surface, which is white when cold. This is called the Otto of Rose. One drop of it rubbed up with half a tea spoonful of white sugar, adding a pint of water during the trituration, will give an elegant perfume, the Aqua Rosa of the shops, far superior to Cologne.

The same day the rose perfects its beauty it dies; nature can do no more, she has exhausted her resources, and sinks to recover strength to renew her efforts the next year. In the north latitudes, this flower is the emblem of Beauty, it is found in them from the 19th to the 70th degree. There are none in the southern continent.

ATROPA BELLADONNA—DEADLY NIGHT SHADE.

CLASS, PENTANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, SOLANACEÆ.

GEN. CHAR. Carolla funnel form with a plaited border. Stamina inclined. Cups two valved, two celled. SPEC. CHAR. Stem herbacous. Leaves ovate, entire.

The name alone of this genus, which is taken from the goddess of Destiny, will give a presage of its poisonous and deadly properties. It is a native of Europe, growing in shady places, amidst walls and rubbish, flowering in June and July, and ripening its fruit in September. This is a yearly plant, not woody, with a thick and fleshy root, from which rise several erect, round, purplish, annual branching stems, to the height of about three feet. The leaves are connected with the stem by very short stalks, and in pairs of unequal size; they are oval shaped, pointed at the end, and not divided; of a dusky green, and rather a whitish on the under surface. The flowers are large and bell shaped, of a reddish hue, and hang upon single stalks that rise from the axils of the leaves. The fruit which is a round berry, changes in the progress of ripening to various colors, from green to red, then a deep purple and sometimes a black; it has a longitudinal furrow on each side, bearing a good likeness to a cherry. It contains two distinct cells, numerous seeds, and is filled with a sweetish violet colored juice. The calyx may be seen adhering to the base of the fruit. It attained at one time great

celebrity among the ladies as a cosmetic, an infusion of the leaves being used for the purpose. Its name, Belladonna, (fine lady,) is doubtless owing to this custom. As many times we may have frequent occasion to employ vegetables, when unable minutely to investigate their nature and properties, botanists have carefully made a series of observations for the purpose of drawing up a set of rules to act as general guides. Plants with five stamens and one pistil, with a dull colored lurid coral, and of a nauseous sickly smell, are always poisonous. This includes the Belladonna, and a botanist by attending to these signs, even if he had never heard of the plant before, would at once avoid it. In countries where it grows wild, its attractive garb veils its deleterious properties, and the beauty and sweetness of its fruit often proves a fatal bait to children, who pluck and eat the berries without hesitation.

This class of plants seem destined to purify the atmosphere of the noxious vapours that would be fatal to man. Wherever corruption exists we find them abound, and it is during the great heats that they attain perfection, converting by their living machinery, the instruments of death to be the supporters of life. When they are transplanted to places in which they are not required in this way, they will become useful in some other. As we ascend to colder regions, we find poisonous plants and animals becoming more rare, until at last they entirely disappear. The aconite, the juice of which is used in the south to tip arrows, to render the wound fatal, is eaten in Sweden as a pleasant salad. This plant though fatal to man, is not so to the lower animals, with many of whom it is a great favorite and entirely innoxious. Its bright appearance and treacherous character renders it the fitting emblem of Deception.

AMYGDALUS COMMUNUS—COMMON ALMOND.

CLASS, ICOSANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, ROSACEÆ

GEN. CHAR. Calyx quinquefid, inferior. Petals five. Drupe, having a shell perforated with pores. Skin pubescent. SPE. CHAR. Lower serratures of the leaves glandulous. The flowers sessile, twin.

The almond tree is a native of Tripoli, in Africa, though common to the other Barbary States, Persia and Syria. In the south of Europe it is cultivated to a great extent, and richly repays the labor bestowed upon it. Much attention has also been paid to it, since its introduction into the United States; the fruit however, is not as good as that imported, and in the northern and middle sections of the Union, it rarely comes to perfection at all. The tree is from fifteen to twenty feet high, and divides into numerous spreading branches. The leaves stand on short footstalks, are about three inches long and three quarters of an inch broad, elliptical, pointed at both ends, veined and minutely serrated, with the lower teeth and leaf stalks glandular, and are of a bright red color. The flowers are large, of a pale red color, varying to white, with very short stalks, and blossoms longer than the cup that contains them; they are placed in numerous pairs upon the branches. The fruit is of the peach kind; the outer covering thin, tough, dry and marked with a long furrow where it opens when fully ripe; inside this is the rough shell containing the almond.

The same tree produces either bitter or sweet almonds. The sweet, though pleasant in the mouth, are bitter in the stomach, and their agreeable taste and appearance does not prevent the unpleasant consequences that arise from their use. When thoroughly chewed they are not so liable to injure. Many a person has gone the rounds of the market endeavoring in vain to select a digestible dinner, little thinking that a few almonds were the real cause of his weak stomach.

It has been beautifully described as an ornamental tree, the delicate flowers of which, varying in color from the fine blush of the apple blossom to a snowy whiteness, and opening so early in the year entitle it to our admiration. It is this haste to bloom even before a leaf is visible, that has made this tree so symbolical of scripture truth, and its Hebrew name, derived from a verb signifying to watch or waken, is strikingly characteristic of this property. When covered with flowers it presents one of the finest sights in nature, these are moved with every breath of air, and often they are in full glory and the next moment the breeze best knows where. It is this property that has made it the emblem of indiscretion, and not as some have supposed its being the first to answer to the call of spring.

The late frosts sometimes destroy the too precocious germs of its fruits, but only add to the beauty and brilliancy of its flowers. An avenue of these trees, white in the evening and stricken in this way during the night, has been seen of a rose hue the following morning, and retained this color over a month, the flower never falling off until the tree is covered with verdue. Its early appearance is a good omen to the farmer. Dryden says:

> **Mark well the flowering almond in the wood,**
> **If odorous blooms the bearing branches load,**
> **The glebe will answer to the sylvan reign,**
> **Great heats will follow and large crops of grain.**

AQUILEGIA CANADENSIS—WILD COLUMBINE.

CLASS, POLYANDRIA; ORDER, PENTAGYNIA.

NATURAL ORDER, RANUNCULACEÆ.

GEN. CHAR. Calyx none. Petals five. Nectaries five horned, between the petals. Capsules five, distinct. SPEC. CHAR. Horns straight. Stamens exsert. Leaves decompound. Growing frequently in the crevices of rocks.

Carrying out the idea that familiarity induces contempt, we are too apt to conceive that what can be had and seen at any time, is worth but little, and give it in consequence about as much attention as we suppose its value entitles it to receive. How few among us care to notice the wild flowers of our country; not that they want beauty, for did this come from a foreign clime no expense would be spared to cherish and preserve it, but being so close to our homes it is overlooked in consequence of that very nearness that should make us love it the more. We are not alone in this respect. Gerard says that the Goldenrod was formerly considered an excellent vulnerary; and the English imported it at half a crown an ounce. But since it has been found in Hampstead wood, even as it were at this town's end no man will give half a crown for a hundred weight of it.

This genus of plants takes its name from the shape of its leaves, which retain water (aqua, water, and lego, to gather.) We mention this more particularly as we notice its derivation being given in a number of the botanies from Aquila an eagle. It is an herbaceous,

climbing plant containing an acid watery juice. This is our common coral colored flowering species, the scarlet flowers of an exceedingly rich and brilliant hue, unapproachable by any flower of its kind, hang pendulous, with the styles and stamens projecting out of the sheath, the orange and scarlet showing each other in bright relief, forming, more especially in rocky situations, one of the most elegant vernal ornaments of the season. It has long been an inhabitant of the rustic flower border, but is more commonly found in the open places of forests or in extensive woods.

There is something peculiar about this plant, that tells its relationship to North America, an expression of joyous beauty that belongs no where else. Linnæus observed that every country exhibited a botanical character peculiar to itself, and that a practical botanist, can usually at the first glance distinguish the plants of Africa, Asia, America and the Alps; but it is not easy to tell how he is able to do this. There is a certain character of sulleness, and gloom, and obscurity in the plants of Africa; something lofty and elevated in those of Asia; sweet and smiling in those of America; while those of the Alps seem rigid and stunted.

After flowering the fruit becomes erect, it has assumed the most showy position, but its attention must now be turned to take care of the fruit and insure its protection. The fashionable belle becomes a mother, the nursery instead of the ball room employs her time. It is perennial, flowering in April and May.

Though this early flower is more delicate in its habits and colors than the common garden species, it is yet often confounded under the same emblem—Folly. Why the common variety obtained the name it is very hard to say, some affirming that it is on account of its nectary, which turns over in a similar manner to the caps of the ancient jesters, while others suppose it to be owing to the party colors it always assumes.

Veronica Beccabunga

VERONICA BECCABUNGA—BROOKLIME.

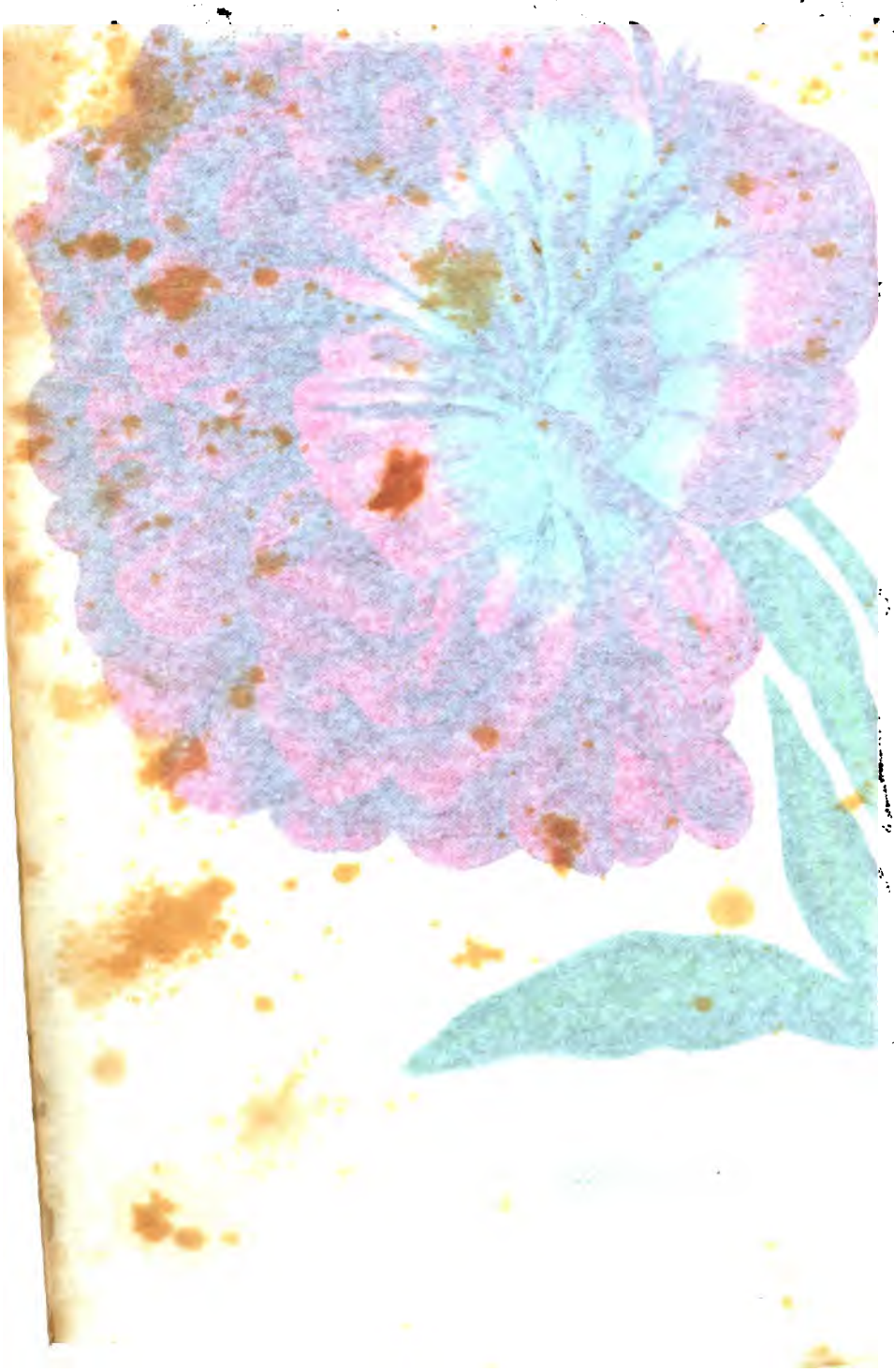
CLASS, DIANDRIA; ORDER POLYGYNIA.

NATURAL ORDER, SCROPHULARCACEÆ.

GENR. CHAR. Carolla five cleft; wheelshaped with the lower segment narrower. SPEC. CHAR. Racemes lateral. Leaves ovate and flat, Stem repent.

Often in a country stroll the humble and quiet beauty of this plant will rivet the attention, and despite the danger, tempt the observer to leave his path to gather it; a practice by the by, that taking into consideration the fact that plants are living existences, is certainly not the best adapted to encourage its brother tribes to show forth their radiant beauties. Many a one in pursuing this flower has met with unpleasant falls, and there are plenty of embryo botanists whose hearts beat high with the hope to rival Linnæus, and who until they experienced some mishaps thought themselves competent to brave all dangers, to whom this plant has proved the *pons asinorum* of their favorite science.

Whoever has read the Pilgrim's Progress will remember how well Mr. Fearing fared in the valley of humiliation, in the same way this plant when allowed to pursue its own course, and entirely neglected by the world, thrives best. In unfrequented wastes, in road-sides if there happens to be some moisture present, in ditches and in neglected gardens, coming to cheer what the others have forsaken, it will be found early in the spring, the harbinger of a brighter and more glorious race, who follow in the steps of their lowly predecessor, to



PŒNIA OFFICINALIS—PEONY.

CLASS, POLYANDRIA ; ORDER, DIGYNIA.

NATURAL ORDER, RANUNCULACEÆ.

GEN. CHAR. Calyx five sepalled. Petals five. Styles none. Stigmas two to five. Capsules pod-like, many seeded. SPEC. CHAR. Leaves undecompound. Leaflets lobed, lobes broad, lanceolate. Capsules downy.

This is a well known plant, raised in every garden, for the beauty of its flowers. This plant is rarely seen in its native state, but partakes the general lot of garden flowers—the unpolished, though honest and candid rustic, is transformed into the polite, worldy, city dandy. In the study of botany it should always be remembered that cultivated plants rarely, if ever, present true characteristics; they ought, in consequence, to be avoided, and wild flowers always chosen for purposes of examination.

The common Peony—the one represented in our plate—in technical language, belongs to the tribe of monsters—that is, flowers which deviate from the common course of nature. It is a wonderful fact in vegetable physiology, that the same buds may be modelled by the life power residing in them, into any shape, and made capable of performing any function relating to the plant. The lower rind of the leaf whorl may become a flower cup, the next fold a blossom, the next stamens, and the elongated end the germ, style and stigma of the pistil. When buds are stunted they become thorns. Thus

all the parts we see are, after all, nothing but developments differing from each other, of one common principle. The Water Lily gives a fine instance of this: as no limits can be traced between the petals and stamens, the limb of the petal contracts and becomes an anther, and the claw assumes the state of a filament. When these stamens are too abundantly supplied with nourishment, they swell out, flatten and become converted into blossoms—the whole assuming the form of what we call a double flower.

The species represented is often called the double female Peony, but, on the authority of Bauhin, the distinction of sex is without foundation. The name is derived from Pæon, a celebrated Physician in olden times. The root, flowers and seeds were formerly all employed. The main body of the root is as thick as the thumb, descends several inches into the ground, and sends off great numbers of spindle-shaped tubes, that gradually taper into thread-like fibres, by which they adhere together. The roots and seeds, when fresh, have a strong, peculiar, narcotic odor that is at first sweetish, and afterwards acrid. Like all the plants of the Natural order which contain it, its properties are owing to the constituents of its acrid milky juice. When dried, the smell and part of the taste is lost, and extracts made with water are, consequently, insipid. It blossoms in June, and forms one of the most gaudy ornaments of the flower garden, where it is generally placed in the centre, which suffrage is accorded to it solely on account of its gigantic size, for the flowers, which are of a deep red, though sometimes paler and even whitish, have the disagreeable smell and taste of the root in a considerable degree. Its appearance and nature gives a good idea of the Eunuchs of the Eastern monarchs, who guard their harems, and whose splendid dresses are much noted by travellers. Instead of being the emblem of Bashful Shame, we should consider it more deserved the name of brazen-faced, as its broad face is spread out to eye unshrinkingly the passers by.

the general shape being that of a longish oval, deeply scolloped, the outline turned in and out as if cut with a pair of scissors.

Fruit bearing lessens the term of existence of trees. In the Oak but one seed out of six generally ripens, and no acorn ever contains more than a single seed: this will account for the great age it attains. The Oak probably takes its emblem, Hospitality, from the fact of its affording both food and shelter. In the early ages, man universally lived on acorns; but as the various kinds of grain rose into notice and were cultivated, they were discarded, and used but in fattening hogs and poultry. Times of famine, however, have induced a return to their use, and ground into meal and baked as bread, they are now used in Norway, and travellers assure us they are very palatable. Eaten without precaution they are liable to produce headaches and colic, but when properly prepared they form a salutary and nutritious food. In Smorland, they are previously boiled and then steeped in water, separated from the husks, ground, and this powder mixed with one-third, or one-half, of corn flour. Certainly a much better way of using it than that done by the people of Brunswick, who give it in warm beer to produce perspiration.

Should we ever be deprived of coffee, acorns would afford the best substitute yet known. The Academy of Science, at St. Petersburg, have made a number of experiments on the subject. By roasting them as you would the coffee itself, occasionally adding a little butter, and then grinding and preparing in the usual manner, a very agreeable beverage will be obtained.

The Spaniards, until very lately, served up the acorn as a delicious fruit at dessert; they have always esteemed them highly. Their fruit, however, is more delicious than our own. It comes from a different species, the Q. suber or cork tree, which, though not so large as the robur, merits more the Celtic name of the genus quer, fine and cuez tree. The exterior bark of this, is the cork which is taken off once in every ten years, and the removal of which improves the tree.

or take much trouble to perpetuate the species, has strangely provided for its preservation.

On the scales of the calyx are fixed, sharp, firm hooks, which attach themselves to every locomotive object that brushes by the plant, such as the clothes of persons passing, the wool of sheep, &c.—thus forming a remarkable mechanism for the dissemination of the seeds.

Though a native of Europe, it has conceived a strong attachment to America; and by the road sides, among rubbish, in waste places, and but too often in cultivated grounds, whence it is unsuccessfully expelled, it may be seen flourishing in state.

The genus takes its name from Arktos, a bear, on account of its extraordinary roughness. It is a perennial plant, the stem juicy, covered with down, with numerous branches, growing generally to the height of about four feet. The leaves are heart-shaped, as I mentioned before, minutely toothed, green on their upper surface, but whitish and downy on their under, and stand on long footstalks. In July and August, its flowers add their contributions to the beauty of the season; they are of a globular shape, very profusely scattered in clusters, and of a not too bright purple color. The concluding part of our description will tend to confirm the belief we have expressed, in this plant possessing some hidden virtues, for Nature has placed on its head a kingly diadem; not because man always attains elevated rank by superior virtue, but that, we think, Nature never acts without a good reason. This aigrette, or hairy crown, is of a consistence between bristle and chaff—the receptacle is chaffy. I know not why the emblem was given to it, but its history will justify its floral appellation—Importunity.

Geranium robertianum.

LITH. OF LEWIS & BROWN, 272 PEARL ST. N.Y.

GERANIUM ROBERTIANUM—HERB ROBERT.

CLASS, MONADELPHIA; ORDER, DECANDRIA.

NATURAL ORDER, GERANIACEÆ.

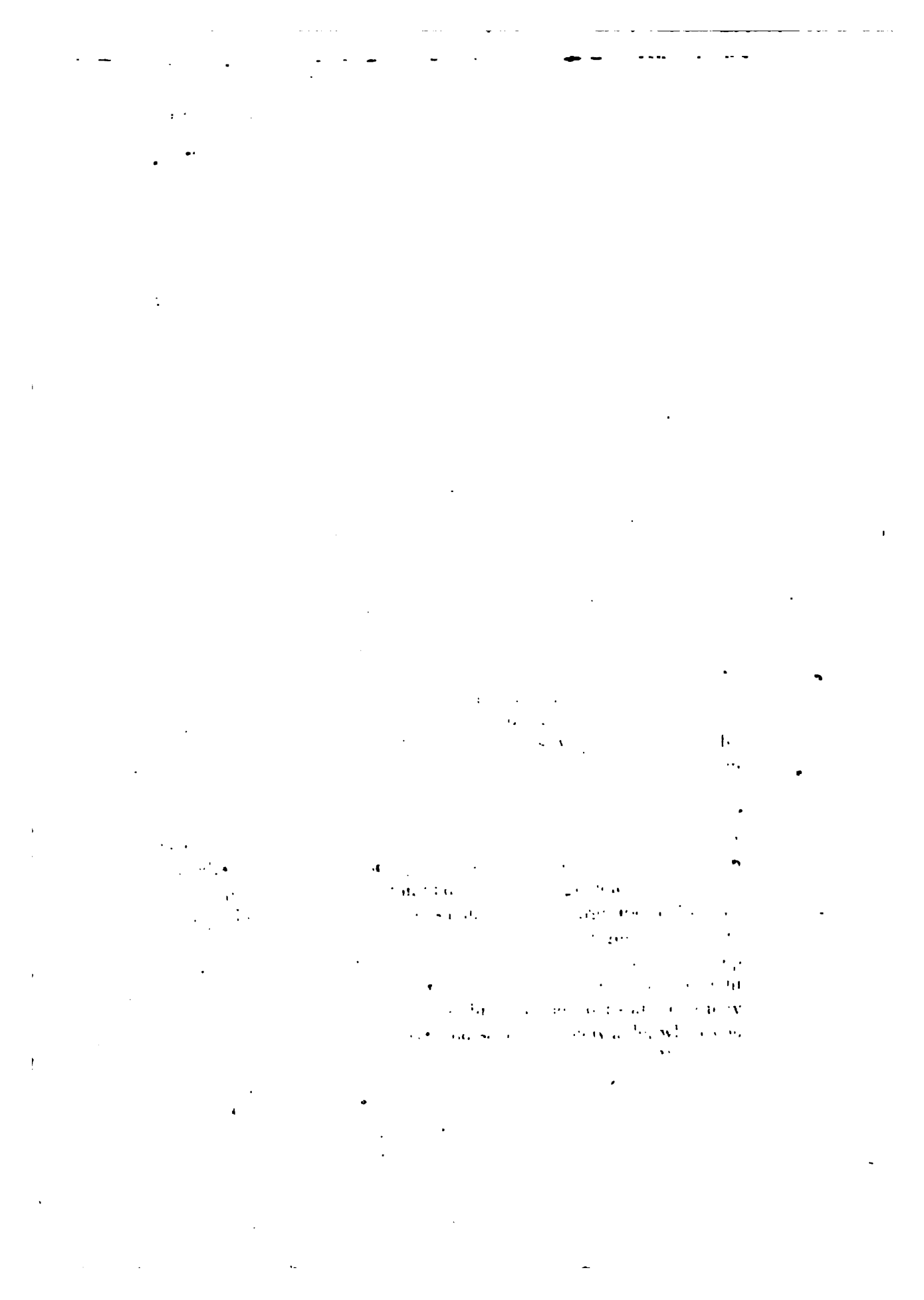
GEN. CHAR. Calyx five leaved. Corolla five petalled, regular. Nectary five honeyed glands fastened to the base of the longer filaments. Fruit fine grained, beaked. Beaks simple, naked, neither spiral nor bearded. SPE. CHAR. Leaves quinate and ternate, gashed. Calyx ten angled.

The whole race of Geraniums form a strange and curious family, both in appearance and habits. They are all in one class, but in three different orders of it; one, the Geranium, is so called from the resemblance of its seed vessel to a crane's bill; in another, Erodium, it resembles a heron's bill; and the last, Pelargonium, a stork's bill. Comstock has described the most obvious difference between the three kinds, when in flower, to be, 1st. The Heronsbill has five stamens and five scales, alternately, with the filaments. 2d. The Storksbill has seven anthers and three naked filaments, with the two upper petals broader than the others and colored veins running through them; also, the upper segments of the calyx, ending in a tube, runs down the foot-stalk. 3d. The Cranesbill has ten stamens and as many anthers, a corolla with its petals alike, it wants the scales of the first, and the colored veins and tube running down the footstalk of the second.

The Geranium proper has three species growing wild in the United States, one of which is the subject of our article. The Herb Robert was at one time, and is now, wherever found, for it is rather rare, used in various diseases as a popular remedy. It imparts its virtues to boiling water, giving it a disagreeable, bitterish taste. It is a branching plant, the stem of which is easily broken, and commonly of a reddish cast. The leaves are somewhat hairy, supported on stalks, three or five generally together, single and deeply parted; the flower stalks long, also hairy, with two terminal flowers; the cup presenting the same downy appearance. The blossoms, though small and exceedingly delicate, are beautiful—the pale purple and striped appearance relieving each other very daintily. The whole plant has a disagreeable, quite strong and very unpleasant smell, which prevents it from becoming a general favorite; it is, consequently, neglected, and for ornamental purposes no one takes the trouble to remove it from its humble position in ditch or road side. If perseverance would win success, it will succeed at last, for it continues in bloom throughout the greater part of summer and autumn. As this is really a pretty flower, we think if some care was taken to cultivate it, the unpleasant smell might be obviated. It is a well known fact, that a great analogy holds between the Vegetable and Animal Kingdoms, and they, too, in many cases where we would not naturally look for or suspect it. The Geranium in this comparison, takes rank with the Mockingbird, and instead of tunes it copies scent, as the rose, peppermint, fish, balm, scented nutmeg, &c., and in another manner, blood, beefsteaks, pastry, and so on through a great variety. All these different species were originally one, no doubt, and became thus diversified in consequence of their life principle being acted upon by circumstances, and the alteration obtained in the first instance descending regularly with the family. And we think it possible to retain the Herb Robert in its beauty, and add, besides, a fragrant scent, so that it shall no longer deserve its floral emblem—Thou art Changed.

Leontodon Taraxacum.

LITH. OF LEWIS & BROWN, 272 PEARL ST. N.Y.



LEONTODON TARAXACUM—DANDELION.

CLASS SYNGENESIA; ORDER POLYGAMIA ÆQUALIS.

NATURAL ORDER, COMPOSITÆ.

GEN. CHAR. Calyx imbricate, with loose scales. Down capillary. Receptacle naked, dotted. SPEC. CHAR. Lower calycine scales reflex. Leaves runcinate, toothletted, even.

The name of the genus is derived from two words signifying a lion's tooth; and of the species from another meaning to alter, as it was supposed to change bad blood into good. The young leaves of this plant are often eaten in the spring as salad, and cases are mentioned in which the roots are roasted for coffee by poor people who find that an infusion prepared in this way can scarcely be distinguished from the real article. It grows spontaneously in every part of the globe, and is every where used and received with favor. The Shakers at New Lebanon make an extract which is celebrated both as a medicinal agent itself, and a vehicle for other remedies. This is the first plant that Spring empties from her lap as she passes over the earth, and the bright golden flowers continue in bloom throughout the summer. The large toothed leaves spring immediately from the root and are of a bright green, from which of course it derives its name. The flower stem springs up immediately from among them to the height of from six to eight inches. It is hollow, very easily broken indeed as any one may know that has ever handled it; and seems scarcely able, when you

become acquainted with its properties, to bear the large yellow flower on its top. The flower sleeps regularly at sun down, and awakes when the dawn has broken. The flower cup is smooth and double, with the scales bent downwards. Like all of its class it is full of little flowers, ribbon shaped and toothed at the extremity. The receptacle is convex and punctured. When the children of the plant arrive at maturity, each one of them with parental care is furnished with a handsome balloon filled with provisions; a gust of wind separates the family, and each separate seed proceeds on a journey of discovery to plant itself down and form as numerous an establishment as its predecessors. When it arrives at the wished for spot, it settles at once; and the balloon decomposing, supplies it with nourishment; and very soon the separate principality is seen in full bloom. All parts of the plant contain a milky, bitterish juice which exudes when they are broken or wounded. The full fresh grown root is about as thick as the little finger, round and tapering, somewhat branched, of a light brown color externally, whitish within, and a yellow woody cord running through the centre. In the dried state it is very much shrunk and brittle, and when broken presents a dark resinous fracture. Sugar and starch and indian rubber exist in the milky juice. It is a very useful and safe medicine, and highly recommended by our most eminent physicians. This flower is used for Love's oracle. By blowing one of its balloons to the beloved, you can in a very easy manner communicate your hopes and fears to her; and by blowing very softly, if a tuft remains, assure yourself of her unchanged and unceasing affection.

Célosia

CELOSIA—COCKSCOMB.

CLASS, PENTANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, AMARANTHACEÆ.

GEN. CHAR. Calyx, triphyllous, like the tentapetalous corolla in appearance. Stamina united at their base to a plaited nectarium. Capsule opening horizontally. SPEC. CHAR. Flowers pentandrous, in-decompound, erect, clustered racemes; leaves ovate lanceolate.

The flowers of this plant are so numerous and small, and withal so closely set together on an irregular flattish surface, that it frequently looks more like a piece of rich velvet than a vegetable substance. It is a native of several parts of Asia, and is common in Persia, China and Japan, where we are informed it is cultivated to such perfection, that the heads or crests of the flowers are frequently a foot in length and breadth. The generic name is derived from the Greek word brilliant; or as some suppose, from another very similar to the first, meaning to enchant.

The name of the tribe signifies not to wither, because many of the species retain their form and color when dried. The specific name is given it from the form of its crested head of feathers; there are many varieties in form and color which spring from the same seed. You must sow this in spring; and when the plant is about six inches high, put it in pots where it must remain. Its magnificent plumes will amply repay the trouble in July and Au-

gust. The seed does not fully ripen until late in the autumn. They are all annuals. A great many of them are mere weeds; but a few species are cultivated for their richly colored enduring flowers, among which, with the exception perhaps of the tri-color, this is by far the most remarkable.

From its continuance after death for such a long period in form and color, it has ever been considered the emblem of immortality; and poets from the earliest times have delighted to sing its praises. Milton tells us that the crowns of the angels are of gold enwoven with this flower; and that though once growing by the side of the tree of Life in Paradise, it was too precious a flower to leave there after man's transgression, and was accordingly transplanted to Heaven to bind around the angels brows. He does not tell us how it returned to earth; it makes little difference however in regard to its history; for as far as we are concerned, it might have stayed there without much loss to us. The foreheads of the gods were adorned with it, as the ancients associated its name with supreme honors. It has been mingled with the dark and gloomy cypress wreath when it was wished to combine sorrow with everlasting recollection, more especially at funerals.

Considering its signification the most appropriate use we have yet known to have been made of it was at the celebrated floral games of Toulouse, where the prize for the best lyrical verses is the emblem, if such can be, of two-fold Immortality, a golden Amaranth. Love and friendship is adorned with it, and we might go on multiplying instances without number; for this flower has had the honor of several books being written on it alone, yet as we think enough has been adduced for the purpose, we shall close with Christina, queen of Sweden, who, becoming immoderately fond of science, wished to immortalize herself by renouncing the throne to cultivate letters and philosophy. She instituted an order of Knights of the Amaranth. The decoration of which was a medal of gold enriched with a flower of the Amaranth in enamel, with the motto "Dolce nella memoria."

JUNIPERUS SABINA—SAVINE.

CLASS, DIŒCIA ; ORDER, MONADELPHIA.

NATURAL ORDER, CONIFERÆ.

GEN. CHAR. Staminate flowers, ament ovate whorled. Calyx, a peltate scale. Anthers, four to eight. Pistillate flowers. Calyx, three parted. Petals, three. Styles, three. Berry, one or two seeded; consisting of the unequal tubercles of the calyx. Nut, bony, one-celled, with balsamic glands at the base. SPEC. CHAR. Leaves, opposite, obtuse, glandular in the middle, imbricate four ways; the young tender ones opposite, acute.

This plant is a native of the plains of Siberia and Tartary, though it is found wild in the southern parts of Europe and the Levant. In our own country, it grows round Lake Superior, and has been, now and then, discovered in other northern portions; a pigmy variety, about six inches high, flourishes on the Rocky Mountains. Its extension seems limited in some measure by its fashionable mode of life, as it belongs to that curious class of Linnæus in which the married couple inhabit different houses, communication between them, depending of course, on insects and on the wind. It is an evergreen shrub, varying from three to fifteen feet in height, with numerous erect, pliant branches, having a singular facility in subdividing. The bark of the young branches is of a light brown, while that of the trunk is rough, and of a reddish brown. The leaves, which entirely surround the young shoots, are quite small, smooth,

unpliable and pointed; they are generally of a dark green color, placed opposite each other on the stem and scaled in four rows, of a glandular nature in the middle, which makes them the most valuable portion of the plant. The flowers, which make no pretensions to beauty, come out in May, succeeded by the fruit, which is a blackish purple berry, resembling somewhat an egg, and on which the remains of the calyx and petals may be seen in the form of tubercles. It contains three seeds.

The ends of the branches and leaves have a strong, very heavy, disagreeable odor, and a hot, bitterish, acrid taste; they are collected for medical use in the spring, and when dried fade much in color, losing besides considerable volatile oil. They give out great part of their active matter to watery liquors, and the whole to rectified spirit. The fresh leaves when distilled with water, yield between fifteen and twenty per cent. of essential oil, which is now an article of commerce; it is of a light yellow color, limpid, strongly odorous, and an exceedingly acrid taste. On boiling down the spirituous tincture, there remains an extract consisting of two distinct substances, of which one is yellow, unctuous, bitterish and pungent to the taste, closely resembling the oil; and the other black, resinous and sub-astringent. This latter form is the best mode, we think, of administering it, as we have all its properties combined in this preparation. It is a very powerful, and when in the hands of science, a valuable and useful medicine; one great reason of its not being more generally employed perhaps, is the great adulteration of its leaves with those of the common red cedar, and which, although differing in taste and smell, are yet so exactly alike in all other respects, that it is often impossible to distinguish between them; and we suppose, except with regard to strength, there is little difference. Savine is the emblem of eccentric learning tinctured with vulgarity, instanced in the conduct of the celebrated Abernethy.

NYMPHÆA ODORATA—SWEET SCENTED WATER LILY.

CLASS, POLYANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, NYMPHŒACEÆ.

GEN. CHAR. Calyx, four or five leaved. Petals, many, inserted into the germ below the stamens. Stigma, radiated, sessile, with a tubercle in the middle. Berry, many celled, many seeded. SPEC. CHAR. Leaves, round cordate, entire, sub-marginate. Lobes spreading asunder, acuminate, obtuse. Petals, equalling the four sepalled calyx.

This name comes from Nymph, a Naiad of the streams. Every thing that bears the name of lily, as far as we know, is particularly warm colored, although it is generally considered the emblem of purity. Our own species far surpasses in beauty and fragrance the water lily of Europe, and is at least quite as large. Bigelow says that the stalks, both of the leaves and flowers, spring directly from the root. They vary in length, from one foot to five or six, according to the depth of the water. The leaf stalks are somewhat semi-circular, the scapes round. Both are perforated by long tubes or air vessels, which serve to float them. The leaves which swim on the surface, are nearly round, with a cleft or sinus extending to the centre, at which the stalk is inserted at the surface; the lobes on each side are prolonged to an acute point. The upper surface is of a bright glossy green, almost without veins; the lower surface is reddish, and marked by a multitude of strong

prominent veins diverging from the centre. The flower cup has four lance-shaped leaves, green without and white within. Blossom leaves numerous, lance shaped, of a delicate whiteness, with sometimes a tinge of lake on the outside. Stamens numerous, yellow, in several rows; the filaments dilated so as to resemble blossom leaves, the anthers in two long cells growing to the filaments and opening inwardly. At the centre is the large solid nectary.

This plant could not stand our cold climate, were it not that the depth of water secures it from too low a temperature. On this element the flowers and leaves float during the day, and when evening comes on quietly fold themselves up and sink below the surface until the next morning, when they rise up and in the bright sunshine present a most gorgeous spectacle. The spectator is not gratified alone by the mere view, for waves of perfume undulate for a considerable distance around him, and almost intoxicate by their delicious fragrance. And this delight can only be enjoyed by those who survey them in their own homes; the scent is truly odor fled as soon as shed, for no attempt has ever succeeded in obtaining the peculiar essence. After adorning the wreath of July, in which it shone as one of the brightest gems, it sinks to the bottom, and in silence and solitude ripens its fruit. This is a roundish, many celled berry, so much impressed with the marks of the petals and stamens, as to be easily known and filled with numerous small seeds. By some this is considered the emblem of SILENCE, but by others that of ELOQUENCE; our readers can adopt the name they think most appropriate. The Indian story of the deluge, or the world rising from the waters, is represented by them in picture by their gods being seated on this flower. Another species has served for food in times of scarcity in eastern countries.

Epigæa R.

EPIGŒA REPENS—GROUND LAUREL.

CLASS, DODECANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, ERICACEÆ.

GEN. CH[illegible] Calyx, double, outer three leaved, inner five parted. Corol, salver form ; border five parted, spreading ; tube villose within. Capsule, five celled, many seeded. Receptacle, five parted. SPEC. C[illegible]R. Stem, creeping. Branches and petioles, very hirsute. Leav[illegible]rdate ovate, entire. Corol, cylindric.

This was formerly known as the Trailing Arbutus ; it was long called such, but latterly, modern botanists have followed the popular name, which, from its resemblance to the Laurel, is certainly a more appropriate appellation. It has a woody stem which though not sufficiently strong to stand erect, is yet proud enough to keep aloof from the common juicy vegetables, and claims affinity with its more highly favored *hard hearted* brethren. It generally frequents rocky woods, where it can easily be distinguished by its trailing appearance and the extraordinary quantity of hair that covers it on every part. The leaves are alternately placed with great regularity, oblong and heart shaped, at the base. The buds appear in early spring and bloom in April, continuing open sometimes to the end of May ; the flowers vary from a pure white to a delicate flesh color, deepening on this latter ground to a rosy and often decidedly purple tint, depending somewhat on its situation with regard to shade. They are beautifully arranged in terminal or

axilary clusters numbering from two to six, standing on very short footstalks. The flower-cup is double, the blossom of a unique salver form, larger than, and protruding from the cup; partaking internally of the universal hairy character of the plant, as do the filaments which are inserted at its base, and the egg shaped germ; the anthers are long; the style straight, terminating with a fine pointed stigma. It gives off a peculiar and extremely fragrant odor, which once perceived is never forgotten. This plant emblemizes Perseverance, though to how many others the same signification has been given it is difficult to discover, as the rules for this branch of the science have never been laid do[illegible] sufficient strictness, and many a one, we are sorry to say, [illegible]he liberty of altering them to suit a passing whim. The [illegible] permanent, are those derived from the east, which forming a part of, and thoroughly incorporated with the oriental tongue, it would be impossible to change.

A writer has remarked that the hieroglyphics of the ancient Egyptians abound in floral symbols, and from hence we may surmise that the Greeks became accustomed to this figurated language. Their poetical fables are full of the metamorphoses of their deities into plants; indeed, there was no flower to which their imaginations had not affixed some meaning; even to this day a young Arcadian is seldom seen without his turban full of flowers, presented to him by the beauty he admires, by the silent encouragement of which, his hopes are kept alive; and it forms one of the chief amusements of the Greek girls to drop these symbols of their esteem or scorn upon the various passengers who pass their latticed windows.

This is an American wild flower; one too, dear to the heart of every Nova Scotian, as it is the first that greets him to tell of Winter's defeat; often before the battle is won by Spring, it opens, and ere the frost is out of the ground, peeps up from amidst the snow.

Rosa Centifolia.

ROSA CENTIFOLIA.—HUNDRED LEAVED ROSE.

CLASS, ICOSANDRIA; ORDER, POLYGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx, pitcher shaped; five cleft, fleshy, contracted at the neck. Petals, five. Seeds very many, hispid, fastened to the inner side of the calyx. SPEC. CHAR. Fruit ovate, with peduncles hispid. Stem hispid, prickly. Peteoles unarmed.

This rose is the emblem of the Graces, as they always wore a wreath of it when following the Muses in ancient mythology. Cupid picked up one which dropped from a coronal, and gave it as a bribe to Harpocrates, the god of Silence; from whence came the custom of suspending it over the banqueting tables of conspirators, in temples, and all other places where it was necessary to preserve secrecy; when this was done, all the subsequent proceedings were considered "Under the Rose."

It is a general rule that the essential oil obtained from a flower is in an inverse proportion to the strength of its odor; the perfume of the hundred leaved rose is very weak, which makes it the only one employed in purposes of distillation; and 100 lbs. of the flowers yield 3-8 of an oz. of oil.

This species has prickly stems, which usually rise from three to six feet in height; its general appearance needs no particular description, as every person is well acquainted with it. The blos-

appearance and perfume have always made them very popular in common use, but instances have been known where very alarming symptoms arose from their exhibition.

The leaf is used as the emblem of the sentence "I will not trouble you," the idea of which originated in a very good oriental story which is told as follows: There was an academy at Amadan, whose statutes were couched in these terms. The Academicians think much, write little and talk less. Dr. Zeb, celebrated all over the east for his talents and learning, being informed of a vacancy in the Academy, hastened to obtain it, but unfortunately arrived too late. The Academy was lost in astonishment and despair; they had not thought of him, but had just granted that, to power, which alone belonged to merit. The President not knowing how to express a refusal which reflected so much discredit on the assembly, commanded a cup to be brought, which he so exactly filled with water that one more drop would have caused it to overflow. The learned candidate understood by this emblem, that there was no place in the Academy for him. He was retiring in disappointment when he perceived a rose leaf at his feet. At this sight his hope revived; he took the rose leaf and placed it so gently on the water which filled the cup that not a drop of it was lost. At this ingenious feat every one clapped his hands, and the doctor was admitted by acclamation among the members of the silent Academy.

Some of the roses yield a fruit or hip which is sometimes used in the form of a conserve, to serve as a vehicle for medicines. It was formerly in high repute for this purpose, but is now seldom employed. The generality of physicians of the present day give the medicine without any cover, experience having convinced them that as long as the palate is aware of its necessity, any attempt to disguise the dose will in reality make it the more unpleasant to the taste and less effective in its operation.

PRUNUS DOMESTICA—PLUM TREE.

CLASS, ICOSANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx five cleft, inferior. Petals five. Drupe with a nut, having the sutures prominent. SPEC. CHAR. Peduncles subsolitary. Leaves lanceolate ovate, convoluted. Branches without thorns.

In England this tree has received the emblem of the words KEEP YOUR PROMISES, as it is every year covered with an immense quantity of flowers, but unless a great deal of care is taken with it, and pruned by the hands of an able gardener of all its superfluous wood it will only yield fruit once in three years, and then but in an inconsiderable proportion to its blossoms. Our own country, however, is much more highly favored in this respect, and as a general rule it grants all that we require.

This tree, the general appearance of which is too well known to need description, came originally from the East; it was brought from Syria into Greece; from thence taken to Italy and in the process of time spread over the world. Our own country furnishes very few fruit trees; those of Africa are little known and imperfectly cultivated; Europe like ourselves, owes them to importation, and we must consequently look to the East for our choicest as well as common kinds; an additional proof that it deserves the name of Garden of the World. Nearly one hundred varieties of this tree

are to be found in the British gardens, rather more in France, and over forty in our own.

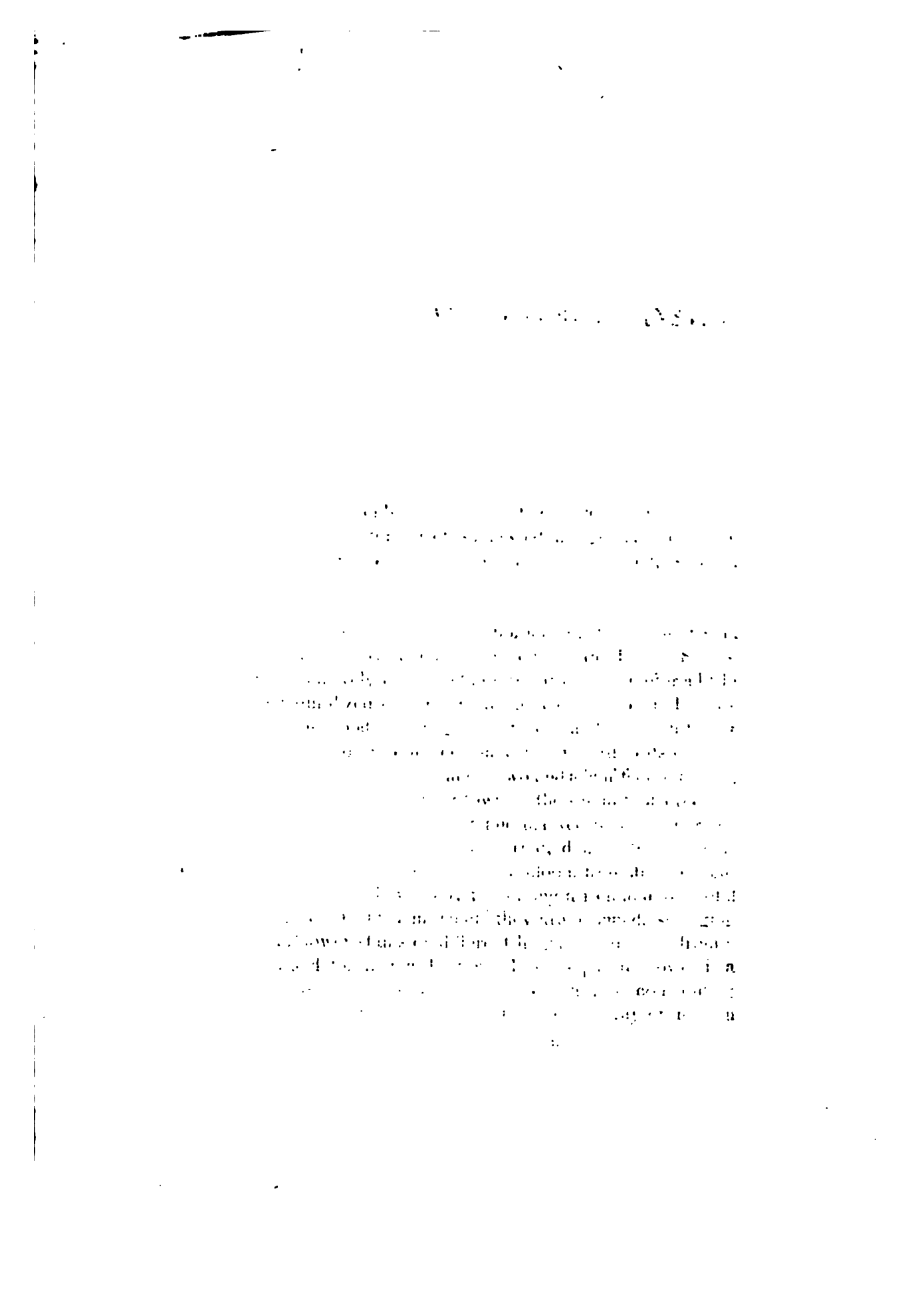
The dried fruit is the commercial form; it is with us, a considerable article of trade. The prunes brought into our markets, come from the south of France; the ones generally preferred from Bordeaux; they are derived from the Juliana of Linnæus. The fresh fruit called prune de Saint Julien by the French is of an oval shape, nearly an inch in length and of a deep violet color. They are prepared for exportation by a careful evaporation of their watery particles in the heat of an oven; the process being finished by afterwards exposing them till thoroughly dried in the Sun. The finest prunes are prepared from the larger kinds; among these the Prune de Monsieur, the one represented in our plate takes the first rank. The variety introduced from Germany is an inferior sort and held in very low estimation; they are somewhat smaller and more rough to the touch, and may be known by the dark, approaching to a black, appearance which they present.

Plums have a pleasant feeble oder and a sweet mucilaginous taste, just tart enough to make it the more agreeable; this they owe to the uncrystallizable sugar, malic acid and gum which they contain. As this analysis gives a great quantity of the elements of alcohol, the Germans have taken advantage of the fact, to make from the fruit an excellent Brandy which in some districts is much employed; producing evil from good, and exactly reversing the example of the Bee, which from poisonous flowers extracts delicious and healthy honey.

Our common *Beach-plum* is much prized for its fine fruit; this is large, globular, about an inch in diameter, of a handsome purple color, with the flavor of the common plum, and quite as worthy of cultivation. It loves the sea, being always found near salt-water. It blooms in May, blossoms small and white; the fruit ripening in August and September.

Tanacetum Vulgare.

LITH. OF LEWIS & BROWN, 317 PEARL ST. N.Y.



TANACETUM VULGARE—COMMON TANSY.

CLASS SYNGENESIA; ORDER, SUPERFLUA.

NATURAL ORDER, COMPOSITÆ.

GEN. CHAR. Calyx imbricate, hemispheric; scales acuminate; rays obsolete, three cleft; egret somewhat marginal; receptacle naked. SPEC. CHAR. Leaves doubly pinnate, gashed, serrate, naked.

This plant is found native by the borders of the meadows in Europe, from whence it was early introduced into the United States. It was at first extensively cultivated in our gardens, but after a little while became naturalized to our climate and can be procured in any quantities from the woods and neglected fields; and so much better when wild, as to render care unnecessary with regard to its growth. It is a perennial herbaceous plant, about two and a half feet in height, with strong erect stems, branching towards the summit, of a reddish color; approaching a six sided shape and marked with fine parallel lines. The leaves are simple, deeply parted, double, the divisions being notched. The flowers which are in bloom from July to September are of a deep yellow color, presenting a rich and beautiful appearance from the manner in which they are grouped, springing as they do from flower stalks of different heights branching from a common stem, and forming a flat top. Each separate flower is a compound composed of numerous florets of which those constituting the disk are perfect and five cleft; and those of the ray or margin

very few, having only pistils and three parted. The calyx is of a curious figure, and will richly repay the labor of studying its parts, and in doing so they will surely find beauties they did not expect. John Bertram, one of the greatest botanists in the new world, was led to study the science in this way; he became so much enchanted with it, that he examined plants by day, and dreamed of nothing else at night; and having learned as much Latin as was necessary, persevered until he became perfectly acquainted with all its known details. The seeds are quite small, of an oblong shape, with five or six ribs, and crowned with a feathery coronet, to the assistance of which it owes its universal dissemination.

There is another variety of this species differing from it only in the shape of the leaves, which are curiously curled; this is the kind usually preferred, and although it possesses less of the sensible properties, is the one most usually sought after in botanical excursions for medicinal purposes, as it is considered more grateful to the stomach.

The odor of tansy is very strong, peculiar, and fragrant, much of which is of course lost in drying. Its valuable properties reside in a bitter extractive matter which it imparts to water, and an essential oil which dissolves in alchohol; this last, however, is in nearly all cases obtained by distillation; it is of a greenish yellow color, depositing camphor upon standing. This oil among root doctors and old nurses who are over wise, has obtained great celebrity; and many a murder, which should have encircled the givers neck with a halter, has been committed by its use. About such, it affords us some consolation to remember that Justice though slow, is always sure; that the book-keeping of the recording Angel is perfect, and every little item of wickedness treasured up for their future settlement; and that although they may escape even Lynch law below, which we sometimes think is rather doubtful, yet for every such action they must render an account and receive a due reward hereafter. It is the emblem of MERIT.

CORNUS CANADENSIS—PIGEON BERRY.

CLASS, TETRANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, CORNACEÆ.

GEN. CHAR. Calyx four toothed. Drupe with a two celled nut. Some species have a four leaved involucrum. SPEC. CHAR. Herbaceous. Leaves at the top whorled, veiny. Involucres ovate, acuminate. Fruit globose.

The natural order, to which this belongs, is exceedingly well marked and peculiar. It is composed mostly of trees or shrubs with the leaves almost always opposite, without any appendages at their base. The flowers are umbrella like in their aspect, but much subdivided and irregular; having their cup attached to the outer covering of the germ; the very small limb four toothed. The stamens which are four, alternate with the petals: the stlyes being united in one. It is now becoming generally known that the trees which yield the Peruvian bark are becoming more and more scarce, so that we may reasonably anticipate before many years, an entire failure in its supply. The interests of both Medicine and Commerce were too deeply involved to delay diligent search being made for a substitute, which this order many suppose will provide. They are all remarkable for their bitter and astringent bark, from which *Cornine*, a principle analagous to *Quinine* is obtained.

The genus takes its name from *Cornu*, a horn, because the wood is hard and durable like that substance; applied to the species before

us it is of course a misnomer. In other respects however, it is almost exactly similar to the Arborescent Dogwood, the type of both order and genus. This humble dwarf Cornel is a very handsome plant, rising from four to six inches above the surface of the ground; it has a creeping root which sends up at near intervals simple ascending stems terminating in a ring of six oval leaves, two of which are lower and larger. Each single cluster, or head, or umbel of flowers is surrounded by a large white common flower cup of four leaves, which is by the inexperienced generally taken for the blossoms of a simple flower. It is in flower from May to July, bearing afterwards red globular berries or drupes; these last appear more innocent in their nature than any other part of the plant, for we are told that in seasons of great scarcity when no other food can be procured by them, the Indians will eat this fruit together with lichens from the rocks; passing by and rejecting even at such time, the more saped fruits like those of the raspberry, accounting all unwholesome that have not solid food in them. This American wild flower emblematizes INDIFFERENCE, or a changed heart.

Such love, by flattering charms betrayed,
  Shall yet indignant, soon rebel
And blushing for the choice he made
  Shall fly where humbler virtues dwell.

'Tis then the mind, from bondage free
  And all its former weakness o'er,
Asserts its native dignity
  And scorns what folly prized before.

CARTWRIGHT.

Sarracenia purpurea.

SARRACENIA PURPUREA—SIDE-SADDLE FLOWER.

CLASS, POLYANDRIA; ORDER, MONOGYNIA.

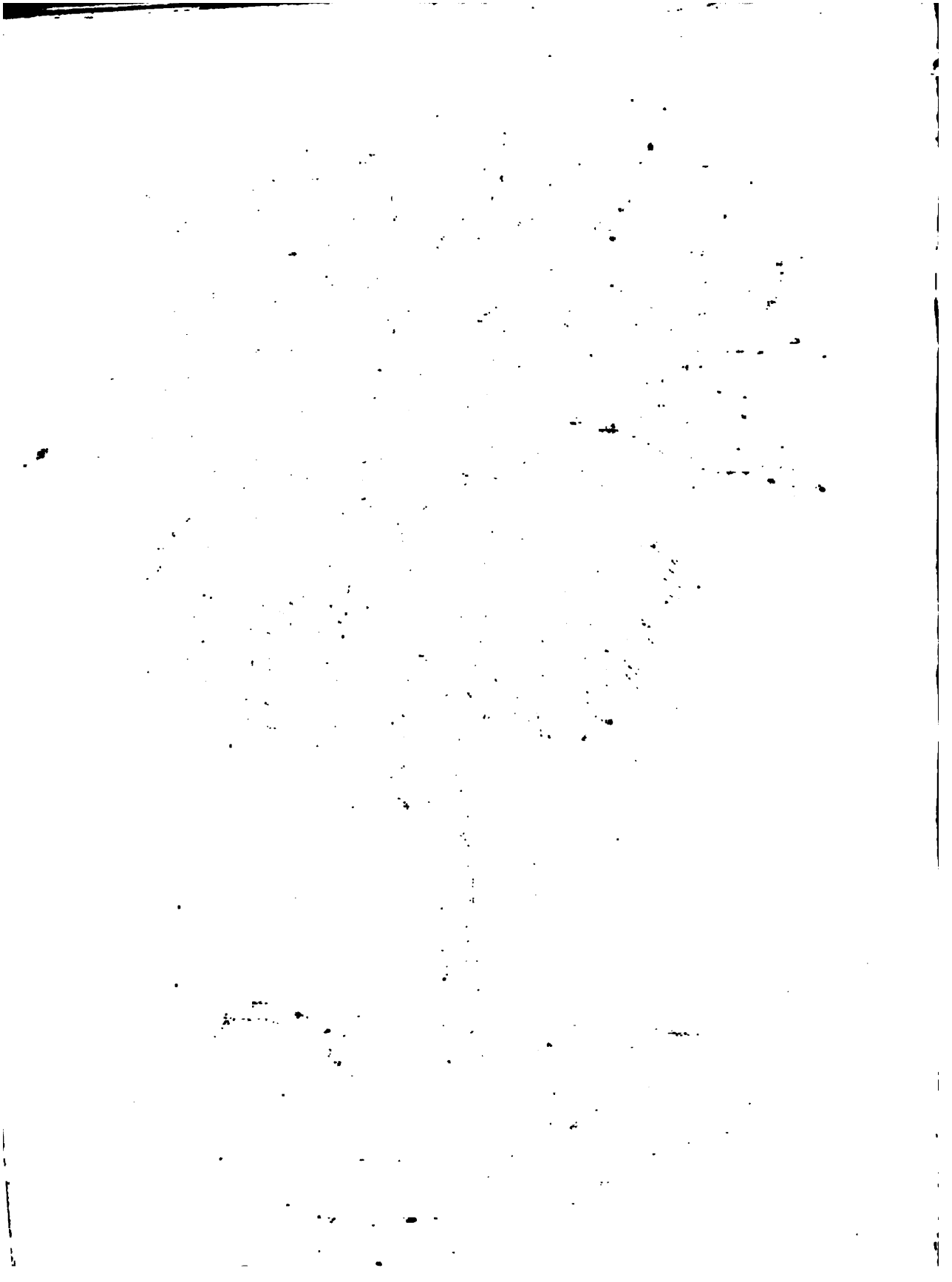
NATURAL ORDER, SARRACENIACEÆ.

GEN. CHAR. Calyx double, permanent, three and five leaved. Corol five petalled, caducous. Stigma peltate, permanent, very large, covering the stamens. Capsule five celled, five valved, many seeded. SPEC. CHAR. Leaves radical, short globose, inflated or cup form, contracted at the mouth, having a broad arched lateral wing; the contracted part of the base hardly as long as the inflated part. Scape with a single large nodding flower.

This celebrated plant owes its strange appearance to a curious pitcher-shaped metamorphosis of the leaf, which resembles very much an old fashioned side saddle; six of these belong generally to each plant. The leaf which springs from the root is formed by a large hollow tube swelling out in the middle, curved and diminishing downwards till it ends in a stem, contracted at the mouth, furnished with a large spreading, heart shaped appendage at the top, which is hairy within, the hairs pointing downwards; and a broad wavy wing extending the whole length on the inside; these lie upon the ground with their mouths turned upwards so as to catch the water when it falls. They hold nearly a wine glass full and are generally filled; making an ocean in which many genera of aquatic insects take up their abode. The stem rises direct from the root;

single terminal flower which is large, nodding, and of an elegant, deeply reddish purple color. It has two flower cups; the external consisting of three small leaves; the internal of five egg shaped obtuse leaves, shiny, and of a brownish purple. The blossoms are five, guitar shaped, obtuse, repeatedly curved inward and outward, and finally inflected over the stigma, which is broad and spreading, divided at its margin into five bifid lobes, alternating with the petals, and supported on a short cylindrical style; this is surrounded by the stamens which are numerous, having short threads and large two celled, oblong yellow anthers attached to them on the under surface.

This genus was named by the celebrated naturalist, Tournefort, in honour of his friend, Dr Sarrazin of Quebec, who first sent him a specimen in 1752. Some suppose the common name to be derived from the fancied resemblance of the expanded stigma to a woman's pillion. In the yellow flowered species of the southern states the bottle is very long, resembling a trumpet, by which name it is often called. The whole species are of course water plants and found naturally only in wet boggy places and marshes. This soil is artificially supplied to them by filling pots with turfy peat or mud from swamps, surrounding the upper part with water moss, and placing the whole in water some inches deep, so as to ensure a plentiful supply of the indispensable element; treated in this way it not only thrives well here, but also in England where it is considered a great curiosity. It flowers in June and July. The seeds of the plant are somewhat seabrous and compressed. It is the emblem of Assumed Eccentricity, as it is merely singular without being of much value; this appropriate signification was conferred on it by Miss. E. Sanford. It is of course one of our American Wild Flowers; among which we leave it to our readers if we are not presenting them with specimens that will compare advantageously with any produced on our globe.



FRITILLARIA IMPERIALIS—CROWN IMPERIAL

CLASS, HEXANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, LILIACEÆ.

GEN. CHAR. Corol inferior, six petaled, bell shaped, cavity for secreting nectar above the claw of each. Stamens same length as corol. Seeds flat, compressed. SPEC. CHAR. Flowers nodding, with a leafy crown above them. Leaves entire, lance-linear.

This plant was first found growing in the woods of Persia, from which place it was brought to Constantinople, and from thence to England, whence we received it afterwards. The generic name is given it from some fancied resemblance to a dice box. In the Turkish language this flower is called TUSAI or TUSHIA as well as TURFANI or TARFANDA, and as the flower was obtained from them it ought in justice, as Philips remarks, to have retained its original appellation. This Lily of the turbaned countries, towers above all the flowers of our vernal parterres, throwing up its tall stem amidst the dwarf flowers of April, like the tall palm among trees, or a pagoda arising out of a Chinese town. At the top of its stem is supported a circle of tulip-shaped corollas turned downwards, which have the appearance of so many gay bells, the stigma answering for the clapper. The whole being crowned by a coma or a tuft of green leaves, gives it a singular and agreeable effect; and when the bulbs are suffered to remain two or three years in the earth, which should be a light dry soil free from manure, they fre-

quently send up a stem that carries two or three whorls of pendulous flowers above each other; it is then called the TRIPLE CROWN. Numerous varieties have been raised from seed; but the most desirable are those of the gayest colors, such as the bright yellow, and the brilliant red, as the dingy colors and variegated kinds make less show in a garden. It has a large, round, scaly bulb, that throws off young offsets, by which it is generally increased in our gardens; but it is more frequently obtained from the shops, which import it from Holland. The roots should be planted at least six inches deep, and not removed oftener than every third year, when the young plants may be separated from the parent bulb, and planted in a soil as already noticed, the strongest of which will flower the following spring, if removed at the proper season, which is about the beginning of July, when the stalk is decayed.

In the celebrated GUIRLANDE DE JULIE, Chapelain wrote a poor metamorphosis, under the painting of this flower, in compliment to Julie, who was a great admirer of the King of Sweden, that lost his life in the battle he gained in the plains of Lutzen. The poet said that had this monarch gained the Imperial crown, he would have offered it with his hand to her; but as the Fates have metamorphosed him into this flower, it is given under the name of CROWN IMPERIAL. And this was the origin of the common name under which this emblem of POWER and MAJESTY is known in every country, as the title was immediately adopted in all the European languages.

From Bactria's vale to Britain's shore,
What time the Crown Imperial came,
Full high the stately stranger bore
The honors of his name.

LANGHORNE.

VIBURNUM OXYCOCCUS—TREE CRANBERRY.

CLASS, PENTANDRIA; ORDER, TRIGYNIA.

NATURAL ORDER, CAPRIFOLIACEÆ.

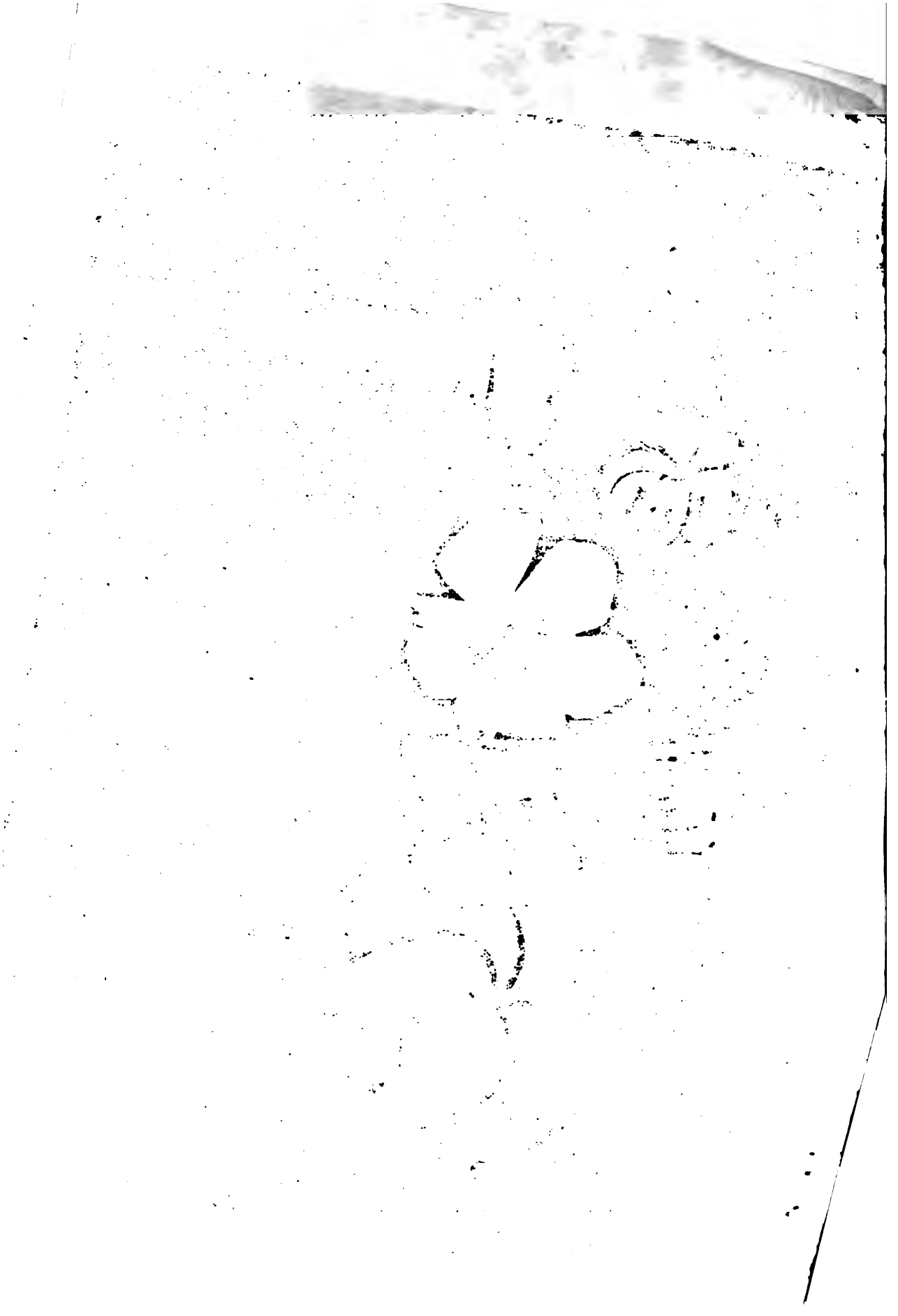
GEN. CHAR. Calyx five parted or five toothed, small. Corol bell form, five cleft, with spreading or reflexed lobes. Stigmas almost sessile. Berry or drupe one seeded. SPEC. CHAR. Leaves three lobed, three nerved. Lobes long, acuminate, with a few scattering teeth. Petioles glandular, grooved above. Cymes rayed.

This is an American plant, growing from five to eight feet in height. The leaves have very large, unequal bluntish teeth, much paler on the lower than on the upper surface; they are borne on smooth foot stalks, which have two glands or secreting bodies at the base of each leaf, giving it a peculiar and easily distinguishable appearance. The peducles or flower stalks arise from a common centre, but are afterwards variously subdivided; this mode of infloresence in botanical language is called a CYME; the outer florets or flowers of the large ray abortive, with large single leaved corollas, with a flat spreading limb proceeding from the top of the tube, abruptly expanded into a flat border generally white and red; mixed and sometimes seperate. It is a woody plant frequenting mountain woods and elevated spots of land, found mostly in the northren parts of the United States. The flowers appear in June, presenting a very showing appearance, enough to entitle it to a well

deserved place in our pleasure grounds; these are succeeded by large, red shiny berries, which ripen very late and remain to ornament the tree even after the leaves have fallen; forming besides, a storehouse of provisions for the birds, which they could not well dispense with. This fruit very much resembles that of the low Cranberry, it is intensely acid and somewhat bitter.

The name of this genus is reckoned by some authors as coming from vieo, to bind; but by Linneus it was counted among the Latin names whose origin it was impossible to trace. The specific name is derived from oxus, sour, and coccus, a berry, owing to the character of its fruit. The whole genus consists of remarkably beautiful and ornamental shrubs; some one of them is in flower during all the summer months, and the handsome berries which succeed give a pleasant appearance in autumn and the first part of winter. This tree emblematizes CHASTE WIT, or Attic Salt.

This tree as we remarked before would be a great addition to our pleasure grounds, if tastefully arranged with the proper colors near it to harmonize. Philips remarks that in planting flowers an indiscriminate mixture of colors is generally bad, although it may be admitted in some instances. Nature seldom confuses her colors, and we should in arranging them endeavor to imitate her operations, and let the dyes in bright suffusion glow. Addison says that there are as many kinds of gardening as of poetry; the makers of parterres and flower gardens he styles the epigrammatists and sonneteers in the art; contrivers of bowers and grottos, treillages and cascades, he compares to romance writers, while those who lay out extensive grounds, he honors by the title of heroic poets. Philips proceeds to say that the all-wise Creator who raised the cedar, formed also the smallest moss; but the former he planted on the mountains of Lebanon, whilst the latter was placed on a pebble. From this wise ordinance of nature, we should learn to select Flora's miniature beauties for the small parterre, leaving



GOSSYPIUM HERBACEUM—COTTON.

CLASS, MONADELPHIA; ORDER, POLYANDRIA.

NATURAL ORDER, MALVACEÆ.

GEN. CHAR. Calyx double, outer one three cleft. Capsule four celled. Seeds wrapped in a long down. SPEC. CHAR. Leaves five lobed, with small prickles at the end of the obtuse leaf, one gland beneath. Stem, smooth and juicy.

The generic name is derived from the Arabic *goz*, a silky substance, and from whence comes the Latin gossypium cotton. The specific name is derived from the character of its stem. This staple of our Southern States could at the present day be very hardly dispensed with. Though not a native, still it takes so kindly our country, that we have monopolized in a great measure the raising of this article for the world. It is very properly the emblem of ART.

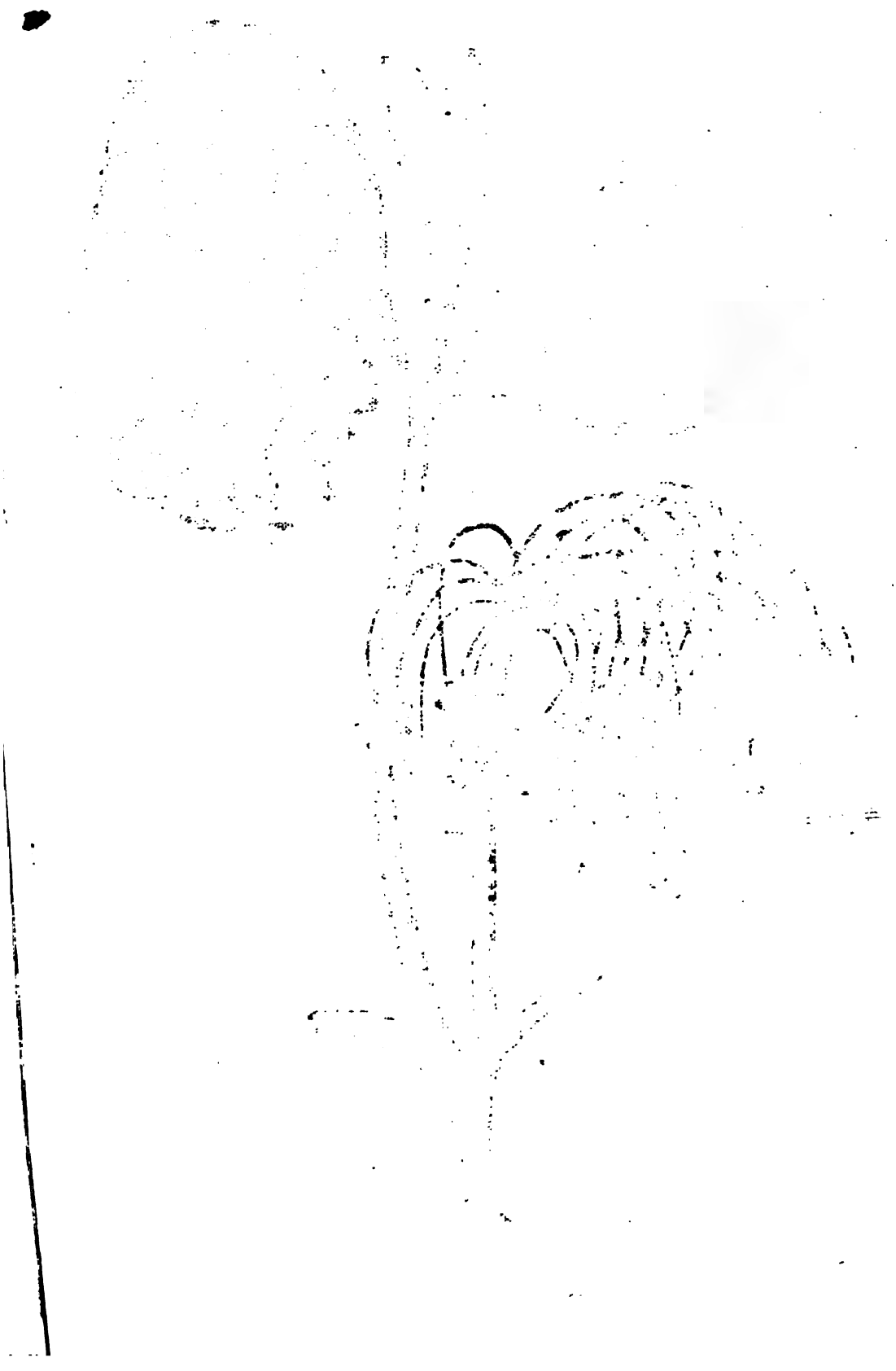
The Cotton grows from four to five feet in height, with a smooth erect stem. The leaves are obtuse, five lobed, with small prickles at the end. It flowers in August. These flowers are succeeded by four-celled capsules, the seeds of which are guarded with peculiar care, being wrapped up in a fine smooth down and that too in large quantities. This furnishes us with the material for making cotton cloth. It is supposed to derive its remarkable adhesive and tenacious properities from its peculiar structure, for

when viewed through a microscope each fibre appears denticulated or minutely toothed.

The history and general appearance of cotton is so well known that it would hardly be worth while, even if we had the space neccessary, to enter minutely into those particulars or even speak of its cultivation, which it should be remembered, as it has been well remarked, is but a part of the care of the planter: very much depends on classing and cleansing it for market after it has been housed. Sorting it before it goes to the jennies, moteing, and removing any yellow particles, are essential to assure a preference at a common market of competition.

The silky down is not the only useful property the plant possesses; its seeds yield a fixed oil in large quantity, that burns well and is extensively used in parlor lamps; and many species are cultivated solely for ornamental purposes.

The West Indian species commonly known as the hairy cotton, is also somewhat cultivated in the United States. It is a handsome plant from three to four feet in height. The leaves are palmated or hand shaped, the lower ones divided into five and the upper into three lobes. As its name denotes, it is of course very hairy. In the East they cultivate the Tree Cotton, which is an evergreen and grows from ten to sixteen feet in height. The species that produces the Nankeen colored wool of China, has not yet been introduced either into the United States or Europe. Lindley observes that the hairy substance of cotton exists for no conceivable purpose except to yield man the means of clothing himself. Faithless travellers and credulous readers for a long time caused the existence of the Barometz or Scythian Lamb, to be believed; a creature said to be half animal half plant; the Cotton plant has far stronger claims to the name of a vegetable sheep.



ASCLEPIAS SYRIACA—SILK WEED.

CLASS, GYNANDRIA; ORDER, PENTANDRIA.

NATURAL ORDER, ASCLEPIADACEÆ.

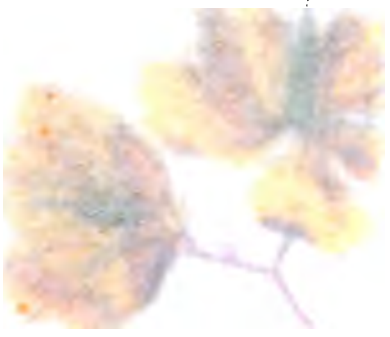
GEN. CHAR. Petals five, reflexed. Nectaries five, concave, erect, containing little horns. Each stamen with a pair of pendulous masses of pollen, suspended from the top of the stigma. Follicles smooth. SPEC. CHAR. Stem very simple. Leaves lanceolate, oblong, gradually acute, downy beneath. Umbels sub-nodding, downy, three to five feet high. Flowers in large close clusters, sweet scented—pollenia are fly traps.

This is a very common American plant; it grows in sandy fields, on the road sides and by rivers, where it flowers in full bloom from July to August, attracting the attention of our summer tourists. The flower stems diverge from each other like the bracts of an umbrella, bearing the flowers on their extremities; these are large, of a pale purple, sometimes green and red, reflexed quite back; the nectary is red, double toothed; the horns moderately incurved; the mass of anthers cylindrical, with black corpuscles at the top of the wings, each of which draws out a pair of yellow egg-shaped pollen masses. The pod or follicle is covered with little sharp prickles; they contain a silky seed-down in large quantities, which is used for various useful and ornamental purposes, and to obtain which, is the principal object in cultivating the plant. The stem is from three to five feet high, affording in its fibres a durable

flax. The down of the seed is rather short for spinning; were it otherwise it is very probable the labors of the silk worm would in a great measure be dispensed with; as it is, however, it makes a good substitute for fur in the manufacture of hats, and supplies the place of feathers in beds and pillows; it is not as tenacious as cotton, as it wants the minutely toothed structure which the latter displays when seen through a microscope. The white juice given out by this plant when wounded, occasions the name Milkweed which is often applied to this species.

The genus is named after its discoverer, Asclepiades, a celebrated physician, born at Prusa in Bithynia, who flourished somewhat before the time of Pompey. He originally taught Rhetoric, but not meeting with success, applied himself to the study of Medicine, in which he soon became famous from the novelty of his theory and practice. Another name often applied to this plant, Syrian Dogsbane, shows its deleterious properties when eaten by the canine race; and it is in fact not less poisonous to the human species. Despite, however, of this well known fact, the young shoots are frequently boiled, a process that appears to destroy the poison in them, and eaten with great relish, the flavor resembling that of the finest Asparagus. It is the emblem of USEFULNESS. Mary Howitt says:

Ah 'tis a goodly little thing,
  It groweth for the poor.
And many a peasant blesses it
  Beside his cottage door.
He thinketh how those slender beams
  That shimmer in the Sun,
Are rich for him in web and woof,
  And shortly shall be spun.
He thinketh how those tender flowers
  Of seed will yield him store,
And sees in thought his next years crop
 Bright shining round his door.



HYPERICUM—ST. JOHN'S WORT.

CLASS, POLYADELPHIA; ORDER, POLYANDRIA.

NATURAL ORDER, HYPERICACEÆ.

GEN. CHAR. Calyx five parted. Petals five. Filaments many, connected very often at the base in bundles or groups of five. SPEC. CHAR. One style to the flowers. Stamina longer than the petals. Colored calyx. Stalk shrubby.

This is the type of a small natural family, the plants of which yield an acid resinous juice, and a bitter extractive matter with balsamic properties. We have many native species in the United States. Modern bigotry gave this the name of St. John's Wort, from an ancient superstition called Fuga Dæmonum, as they believed this plant would defend persons from phantoms and spectres, and drive away devils. For the same reason others called it the Terrestrial Sun, because, say they, all the spirits of darkness vanish at the approach of the Sun; and Phillips has hence made it the emblem of Superstition. It came originally from China, and was first planted in England in the celebrated flower garden at Alnwick, belonging to the Duke of Northumberland.

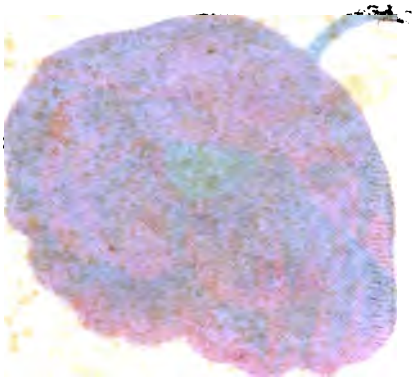
The root is composed of many woody fibres, which strike deep into the ground, and from these arise several shrubby stalks between two and three feet in height, covered with a purplish bark, and garnished with stiff smooth leaves about two inches long and a quarter of an inch broad, placed by pairs, sitting close to the stalk;

they are of a bright green on their upper surface and grey on the under, having many transverse veins running from the midrib to the border. The flowers are produced at the top of the stalks, each with its own proper peduncle or footstalk, which is very short; and grow in clusters. The flower cup is entire, cut into five deeply parted obtuse segments, and is of a deep purple color. The corolla is made up of five large obtuse petals, of a bright yellow color, concave and surrounding an oval germen, which supports a single style crowned by five slender stigmas, that bend on one side. The stamens are very numerous, longer than the petals and terminated by roundish, somewhat inclining to oval, anthers.

Phillips remarks that this is a desirable plant to cover banks and bare patches beneath trees, since it prospers in the shade, where its fine yellow petals and beautiful chives, headed by sparklike anthers, remind the observer of small wheel-fireworks. Its value is enhanced by its continuance in flower during the greater part of the year, in the conservatory; but if planted in a warm situation it will thrive in the open air.

"Come follow Hypericum's golden star,
It will lead to where happiness dwells afar,
With Nature, in peaceful shades;
It will lead to the green hill's flowery brow,
Or by hedge-row paths in the vales below,
Or through turfy forest glades.

"Pluck not her flowers like the saxon maid,
Nor anxiously watch if they flourish or fade,
By the moon of a midsummer eve;
But follow with light steps the golden star,
That guides you to treasures more sterling far,
Than cities or courts receive."



PAPAVER RHŒAS—RED POPPY.

CLASS, POLYANDRIA; ORDER, MONOGYNIA.

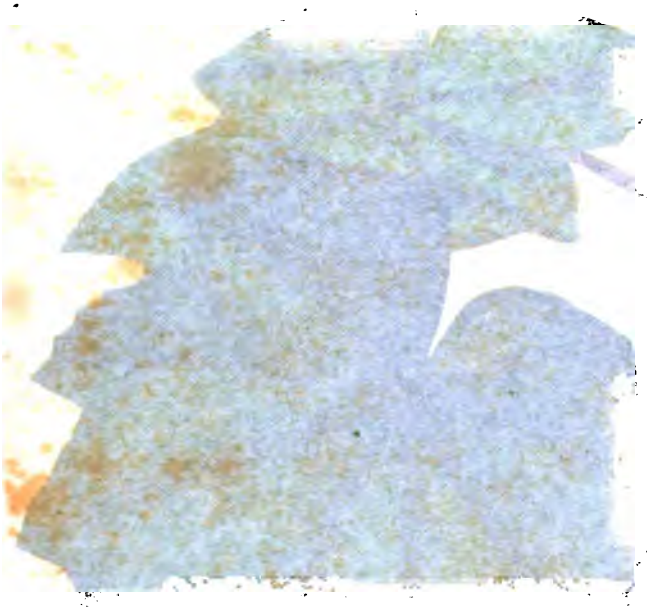
NATURAL ORDER, PAPAVERACEÆ.

GEN. CHAR. Calyx two leaved. Corolla four petaled. Capsules one celled, opening by holes under the permanent stigmas. SPEC. CHAR. Capsules urn-shaped, smooth. Stem hairy, many flowered. Leaves, pinnatifid, incised.

This is the type of the natural order that bears its name. This flower in its double state is one of extreme beauty, both on account of its crumpled and delicate texture, elegance of shape and variety in coloring; some being perfectly white, others plain rose, blush scarlet, or crimson; and on others the pencil of nature seems to have blended the dyes in the most finished style of coloring, with petals thin as gossamer and double as the rose. This flower bursts out of its confinement at maturity with considerable force, throwing off the two leaved caducous calyx to some distance, and astonishing the beholder who sees so large and so beautiful a corolla escape from so small a dwelling. Its petals are frequently white, with a delicate edging of scarlet or rose color, or red petals with white edges, so variously diversified that two plants are seldom alike in three flowers. Where this single kind abounds it denotes a light and shallow soil, and it is singular that when such land is broken up in the spring and no Poppies whatever to scatter the seed, this plant in Europe will be as sure to cover the ground the

ensuing spring as the White Clover in similar cases with ourselves. It is naturalised in the United States, where its red flowers in June will often make our plains glow. The ancients called it the CORN ROSE, and thought it so necessary for the prosperity of their corn, that the seeds were offered up in the sacred rites of Ceres, whose garland was formed with barley or bearded wheat interwoven with Poppies. They frequently mixed the seeds with their food, strewed it over their bread, and also sent it to the table mixed with honey. Phillips also tells us that the Persians sprinkle the seeds of Poppies on their rice and wheaten cakes, which is also practised in Germany, where the seeds are given as a cooling diet to singing birds. This Poppy will thrive in any soil or situation; but M. Pirolle tells us the seeds should only be gathered from the most double kinds, and that the capsules should be taken from the centre of the parent stalk only. It is well adapted to ornament newly planted shrubbries, or the foreground of larger flowering shrubs, as also to give a gaiety to those parts of the parterre where the early flowers have decayed. Almost all species of the poppy yields the narcotic juice, in considerable quantities, that is used in the preparation of Opium; and as this substance is most frequently administered to procure sleep and relieve pain, on this account it has been made the symbol of CONSOLATION. The ancients who regarded sleep as the grand physician and the great consoler of human nature, crowned Morpheus with a wreath of poppies.

"From the poppy I have ta'en
Mortals' balm and mortals' bane,
Juice that creeping through the heart
Deadens every sense of smart;
Doomed to heal or doomed to kill,
Fraught with good or fraught with ill."



CHERIOSTEMON PLANTANOIDES—HAND FLOWER TREE.

CLASS, MONADELPHIA; ORDER, PENTANDRIA.

NATURAL ORDER, STERCULIACEÆ.

GEN. and SPEC. CHAR. Calyx sub-campanulated, five parted. Bracteas three, deciduous. Stamens five, filaments united at the base into a cylinder, separated about the middle of their length, in the form of a bird's claw or monkey's hand. Style one, with an acute stigma. Capsule woody, with five cells, oblong, containing many small seeds.

The beauty and rare configuration of this flower, has long made it celebrated over the botanical world. In an excellent work by Jacquin, professor of botany at Vienna, on the choice plants of America, he enumerated this as one of the most curious and wonderful; from which notice it became generally known, and great numbers of these plants were ordered from Mexico, and cultivated in the gardens of Europe. We find in the narratives of the travels of those whom the love of adventure, incited to explore the fairy regions of the New World, strange accounts of the tree, that carried a red flower in the months of September and October, formed so mysteriously in the figure of a hand, that the palm, joints, nails, and every other part were copied as exactly, some said more so, than the most skilful sculptor could have done; and many times, tinged with a spirit of the marvellous, showing that they fully credited the accounts given by the Mexicans of its supernatural origin.

This tree, from the peculiar character of its flower, had the

name, given it of MACPALXOCHIQUAUHITL, by the ancient Mexicans; the Spanish botanists, replaced this name by three words derived from the Greek, meaning the same thing. Dr. Hernandez, from whom we have copied the description, tells us that it rises from twelve to twenty-five feet in height, giving off branches which, as well as the leaf and flower-stalks that in turn rise from them, are of a dull reddish color. It has a thick, gross, woody root, running horizontally and branching, the fibres sent off from it being of the most extreme delicacy and fineness; the whole covered by a cuticle of a dull obscure color, that easily peels from off its bark. This last is yellowish on the outside, and white within, of a woody nature, but on exposure to the air a deep yellow color is acquired by the whole surface. The branches are given off regularly and alternately, they are large long and spreading, the older ones tortuous, when young of a roundish shape; streaked upon the surface with divers lines which break off and change in every direction, covered with a down of an ashy grey color, which is most thick and sensible at the extremities, either by its great density or the ocreish color it acquires at these parts. The leaf-stalks are round and thick, rather tapering, from four to eight inches in length, or about as long as the leaves, covered like them with down, and alternate, bearing a from five to seven lobed leaf of a bright glossy green on the upper surface, but light reddish from the down on the under, which color is still more prominent in the veins. The appendages at the base of the leaf-stalks are glossy, a little fleshy, reddish, bent over, covered with down, half an inch in length and easily detached. The flowers are supported on short, compressed, downy footstalks, are in clusters at the ends of the branches, simple, and from six to eight together; on the declivities of the barren hills of Toluca, its native home, it flowers at the commencement of winter, and continues in bloom from November to February. The leaves are retained the whole year. The wood is loose and fragile and merits no attention. In floral language we have given it as the Symbol of

Jasminum Officinale.

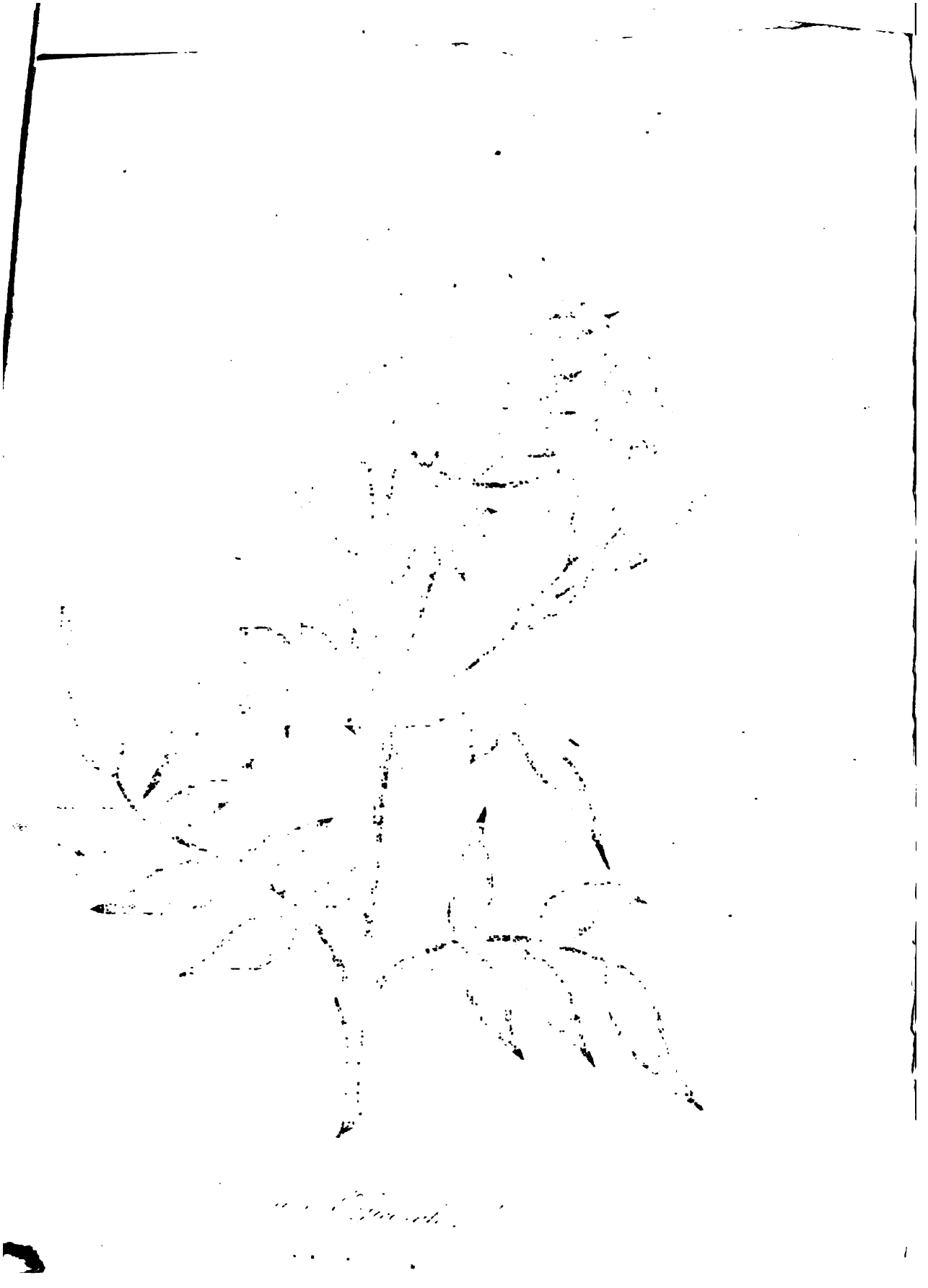
JASMINUM OFFICINALE [illegible]

[illegible]

GEN. CHAR. Corolla [illegible]
two-seeded, each seed solitary. [illegible]
pinnate, opposite. Leaflets [illegible]

The name of this genus is derived [illegible] that [illegible]
good perfume. It was [illegible] 1596,
and came to America with the early settlers, the [illegible]
branches and the delicate star like bestrewing of its flowers, are [illegible]
great abundance and lavishness of perfume, have made it too [illegible]
a favorite to be dispensed with. Its [illegible] branches [illegible]
elegant covering for our trellised arches and windows, [illegible]
with every breath of air, [illegible] a nosegay of Nature the first.
From its property of accommodating itself to [illegible] circumstances,
enduring the various extremes of heat and cold, and being [illegible]
such happy, useful and agreeable [illegible]
it has received the appropriation of [illegible]
are the favorite resort of the [illegible]
never seen to greater advantage than [illegible]
perfumed eyes, are in bloom from June [illegible]

Robert Tyas says that this [illegible]
Court garden at the end of the seventeenth century [illegible]
there, was known only in Europe in the [illegible]



JASMINUM OFFICINALE—JESSAMINE.

CLASS, DIANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, JASMINACEÆ.

GEN. CHAR. Corolla salver-form, five to eight cleft. Berry two-seeded, each seed solitary, arilled. SPEC. CHAR. Leaves pinnate, opposite. Leaflets acuminate. Buds almost upright.

The name of this genus is derived from an Arabian word that signifies perfect fragrance. It was introduced into England in 1548, and came to America with the early settlers; the lightness of its branches and the delicate star like lustre of its flowers, and their great abundance and lavishness of perfume, had made it too great a favorite to be dispensed with. Its flexible branches form an elegant covering for our trellised arches and windows, realizing with every breath of air, the atmosphere of Araby the blest. From its property of accommodating itself to all circumstances, enduring the various extremes of heat and cold, and being still the same happy, useful and agreeable being, by universal acclamation it has received the signification of Amiability. Its flowers, which are the favorite resort of the gay and painted butterfly, which is never seen to greater advantage than when sipping honey out of its perfumed cups, are in bloom from June to October.

Robert Tyas says that this beautiful plant grew in Hampton Court garden at the end of the seventeenth century; but being lost there, was known only in Europe in the garden of the Grand Duke

of Tuscany, at Pisa. From a jealous and selfish anxiety, that he should continue to be the sole possessor of a plant so charming and so rare, he strictly charged his gardener not to give a single sprig or even a flower, to any person. This gardener might have been faithful if he had not loved; but being attached to a fair, though portionless damsel, he presented her with a boquet on her birth day; and in order to render it more acceptable, ornamented it with a sprig of Jessamine. The young maiden, to preserve the freshness of this pretty stranger, placed it in the earth, where it remained green until the return of spring, when it budded forth, and was covered with flowers. She had profited by her lover's lessons, and now cultivated her highly prized Jessamine with care, for which she was amply repaid by its rapid growth. The poverty of the lovers had been a bar to their union; now however she had amassed a little fortune, by the sale of the cuttings, from the plant which love had given her, and bestowed it with her hand upon the gardener of her heart. The young girls of Tuscany in remembrance of this adventure, always deck themselves on their wedding day with a nosegay of Jessamine; and they have a proverb, that she who is worthy to wear a nosegay of Jessamine, is as good as a fortune to her husband. The oil of Jessamine, was formerly celebrated in Italy as a specific for rheumatism and paralysis, at present its only use is to perfume. It is obtained by alternating layers of cotton, saturated with oil of benne, and exposed in a covered vessel to the heat of the sun; the flowers are renewed, till the oil becomes impregnated with their odor, when it is separated from the cotton by pressure.

LOBELIA INFLATA—INDIAN TOBACCO.

CLASS, PENTANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, LOBELIACEÆ.

GEN. CHAR. Calyx five cleft. Corolla monopetalous, irregular, slitted. Anthers curved, united. Stigma two-lobed. Capsule two or three celled. SPEC. CHAR. Erect, covered with hairs, branching. Leaves ovate, serrate. Capsules much swelled.

Monsieur Charles Plumier, an eminent French botanist of the time of Louis the Fourteenth, gave the name of Lobelia to this family of plants, in honor of Matthias Lobel of Lisle, who was appointed botanist and physician to James the First of England, and who had besides, the superintendence of a large botanic garden. We have many species of them in the United States, the most of which are celebrated for curiosity, beauty or use, and first in the latter class ranks the subject of our article. It has, more than any other medicine of late years, attracted the attention of the public, through the medium of our courts of Justice, from its improper application being followed by fatal consequences in many cases. Less than a tea-spoonful of the powdered seeds will surely destroy life in a few hours, and yet this horrible quantity is the dose generally prescribed by the ignorant and reckless quacks who principally use it. We sometimes employ it with great caution in regular practice, but in most instances there are enough of other remedies safer and better.

It varies in height from six to thirty inches. Like most annual plants, it has a fibrous root, from which arises in the smaller plants a simple but in the larger a very branching stem, which is angular and very hairy. The leaves are attached to it without the intervention of a footstalk, scattered, oval shaped, minutely toothed on the edges, alternately marked with veins, and like the stem itself quite hairy. From the angle formed by the stem and a small leaf, arises the flower-stalks, which are short, and produce that kind of infloresence called a spike. The flower-cup is of one piece, cut into sharp spear shaped portions, and stands on the germ which is oval and striped. The blossom is of a bluish purple, somewhat spreading in shape. The anthers are collected in a purple curved body supported on white threads, enclosing the curved stigma. Capsules are of an oval shape and much swelled, filled with a number of small, oblong, brown seeds.

The Indian Tobacco flourishes every where, and is in consequence, well known from Canada to the Southern States. It is in flower at the commencement of July, earlier in very warm seasons, and continues to bloom until the frosts of winter destroy it. It is the emblem of DISTINCTION, which name it doubtless acquired from its brother the Cardinalis, which became celebrated at an early date, for we find Parkinson mention it, in his "Garden of Pleasant Flowers," which he dedicated to Henrietta, Queen of Charles I., as a brave plant. Justice, an old English writer, in 1754 recommends it as a flower of most handsome appearance, which should not be wanting in curious gardens, as it excels all other flowers he ever knew in richness of color. Humboldt and Bonpland, found two species in Mexico, that far outshine even the splendid Cardinalis, the Refulgent and the Shining Lobelies; these cultivated with care, assume a degree of magnificence that is scarcely surpassed by any other plant.

FRAGARIA VIRGINIANA—AMERICAN STRAWBERRY.

CLASS, ICOSANDRIA ; ORDER, POLYGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx ten cleft. Petals five. Receptacle of the seeds ovate, and like a berry. SPEC. CHAR. Calyx of the fruit spreading. Petioles covered with erect hairs. Peduncles, pressed. Leaves whitish, green on the upper surface.

This is an herb with three parted leaves, and a pair of large membranous appendages at the base of the leaves. The veins of the leaves are netted. When the Strawberry plant is about to multiply itself, it puts forth naked shoots of two sorts; one of them is prostrate on the ground, and ends in a tuft of leaves which root into the soil, thus forming a new plant; or as it is technically termed, a runner; the other kind of shoot grows nearly erect, and bears at its end a tuft of flowers which afterwards becomes fruit; or at least what is commonly called so. Tyas remarks that an illustrious French writer, conceived the design of compiling a general history of nature, in imitation of the ancients and some moderns. A strawberry plant, which chanced to grow by his window, dissuaded him from the design. On minutely observing it, he discovered so much to learn and admire even in the Strawberry, that he felt convinced the study of a single plant, with its habits, would suffice to employ the lives of many learned men. He therefore abandoned his design, and wrote a book entitled Studies

from Nature, and in it gave the best history yet known of the Strawberry. This humble plant delights to grow in our woods, and to cover their borders with delicious fruit, which is the property of any one who chooses to gather it. In the United States they are great favorites, and every year presents us with new varieties, vying with each other in size and flavor. The soil should be light, warm and gravelly, without the least mixture of any thing, except rotten leaves, decayed wood, and a small quantity of ashes. They are transplanted in August, the old leaves cut off, leaving only those in the centre; and planted a foot apart. It may also be propagated by seeds, which if sown immediately after gathering, will produce plants, which will come into bearing the following year. It is made the emblem of PERFECT EXCELLENCE. It is found at all seasons of the year, amid the glaciers of the lofty Alps. When the sun burnt traveller, oppressed with fatigue upon those rocks which are as old as the world, vainly seeks a hut to rest himself, unexpectedly he sees emerging from the midst of the rocks, troops of young girls advancing towards him, with baskets of perfumed strawberries. It seems as though each rock and every tree, were kept by one of these nymphs, as placed by Tasso at the gate of the enchanted gardens of Armida. As seducing, though less dangerous, the young Swiss peasants in offering their charming baskets to the traveller, instead of retarding his progress, give him strength to pursue his journey. The Strawberry has the property of not undergoing the acetous fermentation in the stomach, and its fruit has sometimes restored to health, patients given over by every physician. The celebrated Linnæus, was cured of frequent attacks of the gout by their use, a remedy that has since failed, however, in almost every case, with others.

TULIPA GESNERIANA—TULIP.

CLASS, HEXANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, LILIACEÆ.

GEN. CHAR. Corolla, six petalled. Style none. Stigma thick. Capsule oblong, three-sided. SPEC. CHAR. Stem one flowered, sleek, without down, many colored, erect flower. Petals, obtuse. Leaves lanceovate.

This gay flower, having been obtained from the Turks, was called TULIPA, from the resemblance of its coralla to the eastern head-dress, called Tulipan or Turban, and from hence our name of TULIP, as well as that of the French, TULIPE, the Italian, TULIPANO, and the German, TULPE. Moore alludes to this similarity in his Lalla Rookh.

> What triumph crowds the rich Divan to day,
> With turbaned heads of every hue and race,
> Bowing before that veiled and awful face,
> Like TULIP-BEDS of different shape and dyes,
> Bending th' invisible west wind's sighs.

Conrad Gesner, the German Pliny, was the first one who gave a description of the Tulip; and from its having been known in his works, it was properly named after him. The Criterion of a perfect Tulip of the late flowering kind, is that the stem should be strong, elastic, and erect, and about thirty inches above the surface of the

bed. The flower should be large and composed of six petals; these should proceed a little horizontally at first, and then turn upwards, forming almost a perfect cup, with a round bottom, rather wider at the top. The three exterior petals should be rather larger than the three interior ones, and broader at their base; all the petals should have perfectly entire edges, free from notch or serrature; the top of each should be broad and well rounded, the ground color at the bottom of the cup, clear white or yellow, and the various rich colored stripes, its principal ornament, regular, bold, distinct on the margin, and terminating in fine broken points, elegantly feathered or pencilled. The centre of each leaf or petal, should contain one or more bold blotches or stripes, intermixed with small portions of the original, or breeder color, abruptly broken into many irregular obtuse points. Some florists are of opinion that the central stripes or blotches, do not contribute to the beauty and elegance of the Tulip, unless confined to a narrow stripe exactly down the centre, and that it should be perfectly free from any remains of the original or breeder color; it is certain that such appear very beautiful and delicate, especially when they have a regular, narrow feathering at the edge; but the greatest connoisseurs in this flower, unanimously agree that it denotes superior merit, when the Tulip abounds with rich coloring, distributed in a distinct and regular manner throughout the flower, except in the bottom of the cup, which it cannot be disputed should be a clear, bright white or yellow, free from stain or tinge, in order to constitute a perfect flower. Tulip bulbs should be so allotted in grounds, as to embellish those spots which are most deficient in flowers, at the season of their blooming, which is confined to the months of May and June. With the Persians it emblematizes a DECLARATION OF LOVE. Chardin tells us, that when the young turbaned swains present a Tulip to their mistress, it is their intention to convey the idea that like this flower, they have a counteuance all on fire, and a heart reduced to a coal.

MUSA PARADISIACA—PLAINTAIN TREE.

CLASS, HEXANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, MUSACEÆ.

GEN. CHAR. Spathe superior. Coralla of two petals, one of which is erect, and five toothed, the other concave, and honey bearing. Berry oblong, three cornered, many seeded. SPEC. CHAR. Spadix nodding.

There is considerable trouble among botanists, in finding a class in which to place this tree. Some consider it belongs to the class Polygamia, others, among whom is Mirbel, the class Monœcia, and a third party, the class Hexandria, under which we have placed it. It is important, as being the type of a natural order, to which it gives the name, composed mostly of tropical plants, which are distinguished by their simple perianth, and six perfect stamens. The generic name was undoubtedly derived from *Mauz*, the Egyptian appellation of the plant; but Linnæus, altered the etymology, in compliment to Antonius Musa, the physician of Augustus the Roman Emperor, who attained some notoriety by a work on botany. The species of this splendid genus, consists of plants having perennial, roundish, watery bulbs, the stems that arise from them being in some biennial, in others, perennial; a fortunate circumstance, for as the trees grow from fifteen to twenty feet, or even more, in height, the natives cut them down to get at the fruit; they suffer no loss however, as the stem rises the next year, and bears a fresh supply. The leaves are of an enormous size, much used in

thatching, to which they are peculiarly applicable, being from three and a half to ten feet in length, and from eight inches to two feet wide; the foot-stalks that support them, are long, large, smooth and sheathing. The white flowers, supported on a naked, sheathed, cylindrical scape, come out in terminal racemes, succeeded by the fruit, which is borne in spikes sometimes weighing fifty pounds. This is at first green, but changes when ripe, to a pale yellow. The fruit is about eight inches in length and one in diameter; we frequently see waggon-loads of them drawn around our city for sale. The BANANA-TREE—MUSA SAPIENTIUM, is considered by some, merely a variety of the Plaintain; the stalk softer, marked with purple stripes, and the fruit is rather shorter and rounder. The flavor of these fruits is soft, sweet, and very luscious; they are rather mealy, with a charming taste, but dissolve in the mouth without chewing.

This tree is one of the most important productions of the earth; indeed without it many places would be uninhabitable, as no species of provisions can be raised, in the warm climates it frequents, to supply its place. Dr. Wright positively asserts this of Jamaica, in which island it is raised on a very extensive scale, and is the principal article of food. They were taken to the West Indies from the Canary Islands, to which place they were introduced from Guinea; they are also found growing naturally in the East Indies. In the plantations, of which the plate gives a view, they continue in turn in bloom and bearing fruit the whole year; so that it is not without reason the negroes consider them the greatest of earthly blessings. There is scarcely any use in which it may not be employed; from the ripe fruit the liquor *mistaw* is made; it is eaten boiled, roasted, fried, or preserved as a sweetmeat; forming a wholesome confectionary; cattle, poultry and horses will grow fat on it; the water from the soft trunk is astringent, and used as a medicine; the leaves will feed hogs, dress blisters and serve as napkins and table cloths. The flower, in floral language, is the emblem of

STAPELIA IRRORATA—STAPELIA.

CLASS, PENTANDRIA; ORDER, DIGYNIA.

NATURAL ORDER, ASCLEPIADACEÆ.

GEN. CHAR. Corolla rotate, five cleft, fleshy. Column of fructification exserted. Pollen masses fixed by the base. Stigma blunt. Follicles cylindrical, smooth. Seeds comose. SPEC. CHAR. Branches many, sub-erect, toothed. Teeth spreading, acute, crossing. Corolla flat, rugose five cleft; segments lanceolate, acute.

The genus Podanthes, in which Linnæus placed this plant, is not recognised by Lindley, or any of the principal European botanists; it is consequently referred back to the stapelias. The generic name was given by Linnæus to immortalize the celebrated Dr. Stapel, of Amsterdam, who was noted for his love of that science, of which his friend was master. The generality of these plants are natives of Africa, but were transplanted, we are informed, into the botanic gardens of London, as one of their greatest vegetable curiosities. That grand division of the world it seems, determined not to be outdone by its western brother, in the formation of the ungainly trunks of the Cactus, formed on the same kind of general outline, a series of stems, which have been well described as large, fleshy, often covered with teeth or curious looking rough tubercles, that terminate like the Cactus abruptly; giving to beholders the general idea of an unfinished organism, that having nothing to recommend it in the

There are at present quite a number of species in the United States, and we think any one, after a careful survey, would be inclined to give the Cactus the preference with regard to appearance; when in flower, it would immeasurably surpass it. They are all destitute of leaves; the functions of which are performed by the seemingly misshapen stems. They range in height from three to twelve inches; the last the maximum. Our species is of a medium, inclining to large size. The flowers are supported on short foot-stalks, which come out from the sides of the branches; they are of all colors, yellow, purple, green and all their varieties; and most generally, in point of size, disproportionately large, often surprisingly so, to the plant that bears them.

This genus belongs to the natural order Asclepiadaceæ. Lindley observes that at least it must be quite plain that at least three circumstances will separately characterize this tribe; for no other Monopetalous order has either; 1, the pollen adhering into bags; or 2, the anthers adhering firmly to a stigma-like table; or 3, the corolla augmented by a coronet or second row of petals. It must not be expected that all the tribe will agree in the nature of their coronet; some have only a single row of secondary petals, others two or three rows, in various states of combination and development. For the purpose of studying these matters the curiously specked flowers of the Stapelia should be examined, and will richly repay the trouble taken with them. If, however, this examination is delayed until the flowers have naturally expanded, they are always sure to repel by the intolerably offensive odour they emit when full blown; but if cut open some days previous, this inconvenience will be entirely obviated. This plant, in floral language, is the emblem of Offensive Oddity. All the plants in the natural order to which this belongs, abound in a moderately viscid fluid, generally white, but in one species inhabiting the woods of Sierra Leone, it is of the color of blood, which had it grown in Palestine, might be supposed to represent the enchanted tree that so surprised Tancred

DODOCATHEON MEADIA—AMERICAN COWSLIP.

CLASS, PENTANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, PRIMULACEÆ.

GEN. CHAR. Calyx, five-cleft. Carol, wheel form, five-parted, turned back. Capsule, one-celled, oblong, opens at the top. Stamens within tube, short. Anthers crowded. Stigma, obtuse. SPEC. CHAR. Leaves, toothed, longish oval. Umbel, full of flowers. Bracts, oval.

One of our own writers remarks, that our gold Cowslips look like a full branch of large clustering king-cups; they carelessly raise themselves on their firm stalks, their corollas gazing upward to the changing spring sky, as they grow amid their pretty leaves of vivid green. They adorn almost every meadow, and shed a glow of beauty wherever they spring. It was first found by Michaux, in the Alleghany Mountains, and subsequently discovered to be very numerous in the woody country of British North America. Seeds were sent from the Rocky Mountains to the Botanic Gardens of Edinburgh and Glasgow, where plants were raised. Mr. Catesby gave this American Wild Flower the name of Meadia, in honor of a celebrated physician of his time bearing that name in England. Phillips regrets that Linnæus should have thought it necessary to change the generic name of this plant from that of Meadia, and more particularly so since he has given it one so inappropriate, Dodecatheon being derived from two Greek words which mean

twelve gods; and the only cause he could have for adopting so whimsical a name, was from the observation that each of these plants generally produced twelve flowers. This elegant plant flowers about the end of April or the beginning of May; the stalk after rising up to about eight inches in height, throws out an umbel of flowers, gracefully pendant as rockets appear when thrown out of an elevated piece of fire-work. The petals are of a rosy lilac, inclining to the color of the peach or almond blossom; and they are reflexed or turned back over the calyx, giving the appearance of a half expanded parasol, which resemblance is considerably heightened by the long tapering shape of the parts of fructification, and the golden color of the anthers. It should be placed in a shady situation, where the earth is of a loose, moist nature; but its beautiful delicacy and graceful formation make it deserving of a situation in those plants that are potted for the house. It is easily propagagated by offsets, which should be taken from the old plants in the month of August, that they may be fixed well to the earth before the frost comes on. It is increased more rapidly from seed, which the plant generally produces in plenty. These should be sown after they are ripe, either in pots or a shady border. If these plants are much exposed to the sun while young, they are almost sure to perish, so impatient are they of heat. Many persons have lost their stock by placing them in a dry soil, in a sunny part of the garden, without reflecting their natural situations. In floral language it emblemises YOU ARE MY DIVINITY.

Meadia's soft chains five suppliant leaves confess,
And hand in hand the laughing belle address,
Alike to all she bows with wanton air,
Rolls her dark eye and waves her golden hair.

DARWIN.

CAMPANULA ROTUNDIFOLIA—HAREBELL.

CLASS, PENTANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, CAMPANULACEÆ.

GEN. CHAR. Calyx five cleft. Corol, bell-form, valves below, with flattened stamens. Stigma, sometimes three, sometimes five cleft. Capsules, three to five celled, opening by pores on the sides. SPEC. CHAR. Glabrous. Leaves, springing from root, reniform from top, entire and long. Flowers, few and nodding.

The generic name of this plant is derived from a word, signifying a little bell, so called from the bell-shaped corollas of the genus. This species is named from its round leaves, and as there are two kinds on the plant, besides the fact, that the naming leaves are often wanting, as well as early withered, the young botanist is very apt to be confused when he examines it. This plant has a round, straight, stem, which supports one or more flowers. The root-leaves, are on long footstalks, when present, of a roundish, heart shape, somewhat scolloped; the stem leaves are long, alternately placed on the stem without the intervention of a footstalk. The flowers are of a beautiful bluish purple, and hang gracefully; the broad, acute, segments of the corolla, turning boldly and fearlessly outward. The style is longer than the stamens, projecting above them. The usual place in which this plant is to be sought with a prospect of finding, is in sandy, rocky, woods. It is perennial, flowering in June and July.

Lindley remarks that the modest beauty of the Harebells, amply recompenses us, for the absence of the gaudy, scented and often venomous flowers of more southern climates. In the subject of our plate we find the representative of an extensive natural order, the species of which are scattered over all Europe, and the cooler parts of Asia and America, dwelling in dells and dingles, by the banks of rivers, in shady groves, on the sides of mountains, and even on the summit of the lower Alps, where the last lingering traces of vegetation struggle with an atmosphere, that neither animal nor plant can well endure. We know this tribe only in its humblest state, bedecked with no other ornament than a few purple or blue nodding flowers; but in foreign countries it acquires a far more striking appearance. On the mountains of Switzerland there are species with corollas of pale yellow, spotted with black; on the Alps of India, are others of the deepest purple that can be conceived; on the rocks of Madeira lives one whose corollas are of a rich, golden, yellow; and finally, in the pastures of the cape of Good Hope, are ROELLAS, the flowers of which are elegantly banded with streaks of violet or rose, passing into white. In our own land, in almost every shady wood, grows a diminutive herb, with little grassy leaves, and a few bell-shaped, nodding flowers, the true Harebell of the poets, and emblem of DELICATE SWEETNESS.

"There thou shalt cull me simples, and shalt teach
Thy friend the name and healing powers of each,
From the tall Blue-bell to the dwarfish weed,
What the dry land, and what the marshes breed;
For all their kinds alike to thee are known,
And the whole art of Galen is thine own.
Ah! perish Galen's art, and withered be,
The useless herbs, that gave not health to thee."

IRIS GERMANICA—FLEUR DE-LIS.

CLASS, TRIANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, IRIDACEÆ.

GEN. CHAR. Corol, six petalled, unequal. Petals alternate, jointed and spreading. Stigmas, petal-form, cowled, two lipped. SPEC. CHAR. Stem, with long leaves, many flowered; the inferior flowers peduncled.

The Ancients named this plant after the attendant of Juno, because its colors are the same as those which the poets and mythological writers have bestowed on the messenger of that Goddess. Iris is generally depicted as descending from the rainbow; and her arch is said not to vary more in its colors, than the flower that has been honored by her name. Milton distinguishes these flowers as "Iris all hues." Every quarter of the world possesses the Iris, and excepting the Rose, no flower has been more celebrated by the historian and the poet, who have sung the praises of this genus of plants, which so greatly embellishes both the land and the waters, and has at various periods, contributed so much to the sustenance, and added to the medicines of man.

Lindley observes that in this genus, the type of the natural order that bears its name, the structure is very curious. It has three broad and spreading sepals, or calyx leaves, often ornamented with a beautiful feathered crest; three petals which stand erect, and curve over the centre of the flower; while the stigmas are broad,

richly colored parts, resembling petals, and curving away from the centre. At first sight one would suppose the Iris was altogether destitute of stamens, but if the stigmas are lifted up, the runaways will be found snugly hidden beneath their broad lobes, and lying close to a humid lip, through which the influence of the pollen is conveyed to the ovules. We have many beautiful species of the genus native in the United States, so that we need be at no loss for specimens to adorn our gardens. The Iris is the national emblem of France, and has been such from an early period in its history, with the exception of the time when Napoleon ruled, who substituted for it, the bee, which was certainly much more appropriate for an industrious nation.

The species represented in our plate, is an ornamental, deciduous, perennial, displaying its rich, blue flowers in May and June. The stem is many flowered, longer than the leaves; the lower flowers are stalked; spathes colored. When these beautiful flowers are agitated by the breeze, and the sun gilds their petals, tinting them with hues of gold, purple and azure, they have the appearance of light and perfumed flames. This appearance has gained the flower the name of Flaming Iris, as well as the emblem, in floral language, of FLAME. Collected before they are fully expanded, the petals yield a most beautiful blue paint for water colors; they should be pounded in a stone mortar with a wooden pestle, put in the cellar a fortnight, and after boiling down two thirds, adding alum till the requisite color is developed; when it may be poured in shells for use.

The hardy sorts of Iris are easily propagated by parting their roots in the autumn; and few flowers, says Phillips, requiring so little attention, produce so fine an effect as these plants, particularly when their clumps are large. The roots should not be removed oftener than once in three or four years, as they seldom flower so abundantly the year after having been planted.

"Amid its waving swords in flaming gold,
The Iris towers."

CHARLOTTE SMITH.

AMYGDALUS PERSICA—PEACH TREE.

CLASS, ICOSANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx, quinquefid, inferior. Petals, five. Drupe, having a shell perforated with pores. Skin, pubescent. SPEC. CHAR. Leaves, having all acute serratures. Flowers, sessile and solitary.

Like the most of our fruit bearing tubes, this tree is a native of the East, and was first brought to Rome from Persia, during the reign of the Emperor Claudius. It was an old saying that this tree in Meadia, was unwholesome, but when planted in Egypt, became pulpy, delicious and salubrious.

The Peach-tree, in point of stature, is under the middle size; it is of such rapid growth that its spreading branches soon shade a considerable space of ground. The leaves are very smooth, lance-shaped, and serrated on the margins. The flowers come directly out from the bough, without the support of a foot-stalk; the cup is of a greenish red; the blossom itself of a delicate crimson, varying in different flowers, from light to dark; they are in bloom in April; the fruit ripening from July to the beginning of October, and sometimes later.

The generic name is derived from the Greek, meaning to lancinate, because when the green husk is removed from the fruit, the shell is found covered with lacerations; the specific name of course

refers to its native country. It has been well remarked that the peach resembles the pea-pod, in the simplicity of its formation, being composed of but a single covering or leaf. The hairy cuticle of the under surface of the leaf may be easily recognised in the downy skin of the peach. The cellular texture of the middle of the leaf, absorbing a great deal of sap as it grows, and swelling out, forms the fleshy substance of the fruit. The upper surface of the leaf, deprived in a great measure of moisture, and starved, as it were, by the voracious appetite of the middle portion, contracts its fibres, becomes tough, then indurated, and at length converted into a shell or hollow stone, affords a most secure shelter for the seed.

The Peach in the United States seems exactly suited to our country, and flourishes as well, if not better, than in its own Persian home, growing and producing rich crops, unequalled in size and flavor, wherever Maize or Indian Corn will come to maturity; and these important vegetable products have in this way become, as it were, tests of each other. Many in the State of New Jersey exclusively cultivate this fruit, and we are told that at Shrewsbury, on a single plantation, ten thousand bushels are annually produced for the New York market; and those on the Delaware, yield twice this amount. It was formerly cultivated in the Middle, Southern, and Western States for the purposes of distillation; but to a much less extent at present, owing to the efforts of the Temperance Societies. The best peaches possess thin skins, thick and firm flesh, quickly filling up when pitted by the finger, and abound in a sweet, vinous and richly flavored juice; the stone is quite small. Prussic Acid is obtained in considerable quantities, both from leaves and kernels. Delicious imitation Noyeau can be obtained by steeping the leaves in brandy, sweetening with sugar and fining with milk. The inhabitants of Scio employ them in dying silk a deep green. In floral language, the Peach emblemizes the sentence, YOUR QUALITIES, LIKE YOUR CHARMS, ARE UNEQUALLED.

CYPRYPEDIUM INSIGNE—BENGAL LADIES' SLIPPER.

CLASS, GYNANDRIA: ORDER, DIGYNIA.

NATURAL ORDER, ORCHIDACEÆ.

GEN. CHAR. Colored, four leaved, spreading calyx. Nectary swelled and hollow. Style with terminal lobe, and petal-like attachment above. SPEC. CHAR. Leaves cartilaginous, ligulate, not spotted, twice as short as the hairy scape.

This whole family of plants according to fabulous history, owes its origin to the licentious son of the satyr Patellanus and the nymph Acolasia, who presided at the feasts in honor of Priapus. Being present at a feast of Bacchus he laid violent hands upon one of the priestesses of that God, which so enraged the Bacchanals against him that they instantly tore him in pieces; and all the the remedy his father could obtain from the gods, was, that his mangled corpse should be transformed into a flower to bear his name, as a blot upon his memory.

This flower is a native of Bengal in India; its generic name is derived from two Greek words signifying Venus and a Slipper. It has two of its petals so ingrafted as to appear but one, with a notch at its extremity; the sac or cavity is very large, more resembling, according to Nuttall, a bladder than a slipper. In common with the rest of its tribe it has hairy leaves, which in this species are strap-shaped, free from spots, and one half the length of the hairy flowerstalk that springs from the root in their midst, to support

the blossoms. We have several species of this genera native in the United States, which are much more highly prized than in former times, and of which florists are endeavoring to learn the habits so as to cultivate them with more success.

Phillips remarks that the idea of these plants not bearing cultivation is as absurd as the old story of their springing from the birds. He frequently transplanted several species of this tribe in his garden, and they never failed to draw attention by the beauty of their spotted foliage and the richness of their purple and lilac colors. He collected them as soon as they appeared above the earth in their natural situations, taking them up with as much earth as possible about their roots and planting them in a similar soil to that in which they were taken; and they having remained without disturbance for several years, were found in stronger growth than at first.

Most of the genera and species of this tribe are of perennial duration, and grow in moist and shady places where there is an abundance of vegetable earth; all are of difficult cultivation and very slow propagation, and but seldom reward, according to Nuttall, the care bestowed upon them; nor will many exist at all except in the shade of the forest and amidst recent vegetable soil.

The Persians and Turks call the roots of some of the species of this tribe Salop, and with the bulbs of which they prepare their favorite drink of the same name, which is drunk hot with the addition of milk and ginger to make it palatable.

In rich shady woods the species of the genera about which we are writing, can be found in flower in May and June. The flowers, of which there are from one to three on each stem, are of various colors, yellow, red and white. We are told that in all Europe there is but one species. In India, from which the subject of our plate was taken, there are many species and varieties, some exceedingly curious, and a few with evergreen leaves. It is the emblem of what its shape represents. [illegible] Summers.

SOLANUM TUBEROSUM—POTATO.

CLASS, PENTANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, SOLANACEÆ.

GEN. CHAR. Calyx, five to ten parted, persistent. Corol, bell or wheel form, five lobed, plaited. Anthers, thickened, partly united, with two pores at the top. Berry, containing numerous seeds, two to six celled. SPEC. CHAR. Stem angled, with wings, not armed. Leaves interruptedly pinnate, with entire leaflets. Flowers sub-corymbed. Roots knobbed, tuberous.

The generic name of this plant is derived from *Solor*, to comfort, as it gives ease by its stupifying qualities. This genus is known in the natural order to which it belongs by the anthers opening by two holes or pores at their points; it contains the BITTER SWEET, LOVE APPLE, EGG PLANT, as well as the POTATO. As Lindley remarks, one would imagine that this is a singular assortment of eatable and poisonous plants; but in truth, the fruit of these is in all cases deleterious till it is cooked; Tomatoes are stewed, Egg Plants are washed and fried, before they are eaten, and it is not to be doubted that they would all prove injurious in a raw state. The fruit of the Potato is notoriously unwholesome; and if its roots are not so, that circumstance is to be ascribed in part to their being composed almost entirely of a substance like flour, which in no plants is poisonous if it can be separated, by heat or washing, from the watery or pulpy matter it may lie among. This is a South

American plant, and was discovered by Europeans in its wild or native state near Quito, in the mountainous regions of the Southern Continent; in the same place modern observation has ascertained that it is still growing. We did not receive it direct from thence, but from Virginia, to which place by some means it had arrived. Sir Walter Raleigh was the first who carried it to England, and we are told by Gough, an old English writer, that they were first planted in Europe on his estate near Cork. Little more than a hundred years ago Bradley informs us that they were used not as common food but as delicacies, and even then were considered inferior to radishes and skirrets. Since the beginning of this century, however, its use has increased so rapidly as to furnish many nations with their principal supply of food; the failure of this crop at the present day has thrown all Europe into consternation, and will probably be the instrument of doing that which neither justice or policy could previously effect, the abolition of the corn laws of England. With us this is an annual plant, perishing after the ripening of its numerous tubers or roots, which are in reality, as Nuttall remarks, only so many short and succulent running branches capable of growth when divided into eyes or single buds. The foliage is of a beautiful green color, and the blue or white flowers come out in July. The varieties are almost as numerous as the places in which they are cultivated, and new ones may at any time be produced by sowing the seed that may be found in the balls that grow on the vines; these at first will produce but small tubers, which in turn must be planted, and repeating this three or four years will ensure at last a good crop. In floral language the Potato emblemizes TRUE RELIGION, as from a natural poison it produces a healthy and useful fruit.

Rubus Idaeus.

RUBUS IDÆUS—RASPBERRY.

CLASS, ICOSANDRIA; ORDER, POLIGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx five cleft. Petals five. Berry composed of one-seeded acini. SPEC. CHAR. Leaves quinate, pinnate and ternate, tomentose underneath. Petioles channelled. Stem prickly.

The Raspberry says Lindley, is a shrubby plant, having its stem covered with hard, hooked prickles. The leaves are divided in a curious manner, five being at one time and three at another upon a stem, all covered on the under surface with a downy pubescence. The calyx has five divisions; there are five petals, inside of which are numerous stamens arising out of the side of the calyx. The pistil is composed of a number of carpels, arising from a central receptacle. It has a dry core, off which the little thimble like fruit may be pulled. Little dry threads are seen rising from the centre of a multitude of little projections, with which the whole surface is covered. These are styles, and the projections out of which they grow, are carpels in a ripe state. Instead of remaining dry, as they become ripe these carpels swell, and acquire a soft pulpy coat, which in time becomes red; they are crowded so closely that by degrees they press upon each other, and at last all grow together into the thimble shaped part which is eaten. In order to gain this succulent state they are forced to rob the receptacle of all its juice, and in the end separate from it, so that when the fruit is gathered

the receptacle, under the name of core, is thrown away, without the remotest suspicion that this very receptacle, in a pulpy state, forms the delicious Strawberry. In one case the receptacle robs the carpels of all their juice in order to become gorged and bloated at their expense; in the other the carpels act in the same selfish manner upon the receptacle.

The Raspberry is indigenous to the United States and Canada. It is a shrub of rather low growth, varying from four to six feet in height, and does not present a peculiarly inviting appearance. The flowers, which are white, come out in May, in panicles or clusters, and from the wood of the former year; these are succeeded by the fragrant, cooling fruit so much admired when mixed with sugar at the dessert table. The root is perennial but the top is generally biennial.

The expressed juice of the Raspberry mixed with sugar and fermented, produces a fragrant wine of the most delicious flavor, and which has effected considerable in bringing the plant into notice. The various other uses to which it is applicable need not, of course, a repetition here. It is said that a new variety, perpetually bearing, has been found growing wild in Ohio, which is likely to meet with a warm reception. We are told of another species in the valley of the Columbia River, thrice the size of the common kind, and of a delicate and rich yellow color. A moist rich soil with considerable exposure, is recommended for making them produce abundantly. The rows should run from east to west, with the taller sorts in the rear, and placed at some distance asunder; the main object in all plantations being to give all the full benefit of the sun. Three young plants should be placed on each hill, six inches apart, so as to form a triangle; cut at the time within a few inches of the ground. In autumn all the weakly shoots and the wood that has borne fruit, should be cut off. They are best at three years old; but must all be destroyed every six years. The Raspberry is the emblem of Prudery.

TULIPA GESNERIANA—TULIP.

CLASS, HEXANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, LILIACEÆ.

GEN. CHAR. Corol, six petalled. Style none. Stigma thick. Capsule oblong, three-sided. SPEC. CHAR. Stem one flowered, sleek, without hair. Flower many colored, erect. Petals obtuse. Leaves lance-ovate.

The Turks regard this flower with so much delight that a Feast of Tulips is celebrated annually, at the Grand Seignior's seraglio, the description of which when related to us in all the flowery garb of their language, leaves even the delineation of the fairy scenes of the Arabian Nights' tales in the shade. We are not enabled to discover any mention of the Tulip in the works of Pliny, which induces us to think that it is not an indigenous plant of the Levant, but that it was introduced from Persia and other eastern parts, in later days, and that it has since so naturalized itself as to appear like an indigenous plant. Where the climate allows the Tulip to propagate itself by seed so readily as in the neighbourhood of the Levant, it is not at all extraordinary that it should have been found growing in the wild state, as it is frequently discovered in the vicinity of Constantinople. It appears to have been scarce there, however, even as late as the sixteenth century, as a German Ambassador sent some bulbs home, with the observation, they cost an enormous price. The bulbs being often sent without particular

directions, many laughable anecdotes resulted, as to the use made of them by the persons who received them. It is related that an Antwerp merchant had a cargo of Tulip roots, and taking them for a sort of onion, ordered some to be roasted under the embers, and ate them accordingly, as he would onions, with oil and vinegar, the rest he set in the kitchen garden, among the cabbages, where most of them perished, except a few a gentleman took under his case, which to the surprise of all produced a most gorgeous variety of flowers. A sailor having taken some goods to a Dutch merchant, had a herring given him for his breakfast, but, seeing what he supposed to be a kind of small onion, lying upon the counter, the tar carelessly took up a handful, which he immediately ate with his dried fish. These proved to have been Tulips of so much value that it was estimated a magnificent breakfast might have been given to the heads of the Dutch government, for less expense than the cost of the condiment, which the sailor so inadvertently took with his salt herring. A breeder is a bulb in which the self color of the petals does not begin to break, not too aged to have lost its vigor, and best in its eigth or ninth year from the seed. When such a Tulip throws up a strong tall stem, headed by large petals, blunt or rounded at the end, if the base be either pure white or bright yellow, and the anthers and stigma black or very dark, it is accounted a breeder of first rate qualities; the perfecting of its capsule is encouraged, the seeds carefully gathered when ripe, and from these seeds, in a course of years, many fine varieties of variegated flowers may be expected, partaking of the fundamental good properties of the breeder.

"These brilliant hues are all distinct and clean,
No kindred tint, no blending streaks between;
This is no shaded run off."

Salix Babylonica.

SALIX BABYLONICA—WEEPING WILLOW.

CLASS, DICECIA; ORDER, MONANDRIA.

NATURAL ORDER, SALICACEÆ.

GEN. CHAR. Calyx ament, composed of scales. Corolla none. Male. Nectary a melliferous gland. Female. Style bifid. Capsules one celled, two valved. Seeds downy. SPEC. CHAR. Leaves lanceolate, taper pointed, sharply serrated, smooth, glauceous beneath. Stipules half ovate, taper pointed, revolute. Catkins naked, accompanying the leaves. Ovary ovate, sessile, smooth. Branches pendulous.

The Weeping Willow, the most beautiful of the genus to which it belongs, is a native of the east, where its drooping pendulous branches, waving over lakes and streams, cause it to be as much admired as it is with ourselves. It grows wild on the coast of Persia and is common in China. It was introduced into England from the Levant, in 1692, and from thence brought to America. It has been said, remarks Loudon in his Encyclopædia of Plants, that the celebrated Pope introduced this tree into England, but this appears to be a mistake, since he was only a few years old at the time of its introduction. The celebrated specimen of this tree which stood in the poet's garden at Twickenham, was a cutting employed in some rods that came in a package from Spain. Pope being present when the package was opened, observed that one of the rods was still green, and under the impression that it

might produce something new in England, planted it in his garden. From this came Pope's famous willow so often mentioned by travellers, and which though it has given rise to many others, is not the parent of all the others, nor was it the first in that country.

The name is derived from the Celtic *Sal*, near, and *lis*, water. It emblemizes MELANCHOLY, from the circumstance that gave it its specific name. "By the waters of Babylon we sat down and wept, when we remembered thee O Sion! As for our harps we hanged them up upon the willows that are therein." Tyas remarks, that we cannot conceive a more touching appeal to human sympathy, than the mournful complaints of the daughters of Jerusalem. Their Babylonish conquerors having led them away captive, "required of them a song and melody in their heaviness," to "sing to them one of the songs of Zion." But the hearts of her children were surcharged with grief, and they asked "How shall we sing the Lord's song in a strange land?" oppressed with sorrow and bowed down with affliction, they hanged their harps upon the willows, and sat down and wept. From this the Weeping Willow has ever been a sacred emblem of Melancholy; the favorite tree for cemeteries and burying grounds. Around New York, and often within the city itself, we see many beautiful specimens, which are cultivated with the greatest care. It thrives well only on the water's edge, and there its perpendicular and streaming foliage, seeking as it were to dip in the clear flood, and reflected accurately in it, forms a striking and interesting object. Some species of willow are solely employed in the manufacture of baskets; others again are useful as medicine; SALACINE, a vegetable principle similar in its nature to QUININE, being extracted from them. Exclusively confined to the northern climates, they are among the earliest flowering shrubs, and the leaves as well as inflorescence, are generally very beautiful.

ASTER CHINENSIS—CHINA ASTER.

CLASS, SYNGENESIA; ORDER, POLYGAMIA SUPERFLUA.

NATURAL ORDER, COMPOSITÆ.

GEN. CHAR. Calyx, imbricate, inferior, scales spreading. Egret, simple, pilose. Receptacle, mostly deep pitted. SPEC. CHAR. Leaves ovate, coarsely toothed, stalked. Cauline leaves, sessile, wedge-formed at base; floral leaves, spear-shaped entire. Stem, hispid; branches, with single heads.

The numerous family of radiated flowers were named *Aster*, from the Greek, signifying Star. The French, says Phillips, call this autumnal flower REINE MARGUERITE, Queen Daisy. The Chinese generic term for this flower is KEANG NAM FA. The European parterres, and in turn our own, are indebted to the missionary, Father D'Incarville, for the gay robe which this various colored flower throws over them during the latter months of Flora's reign; he having sent the seeds from China to the Royal Garden of Paris, about the year 1730, where the plants produced only simple flowers of one uniform color, but which, through cultivation and change of soil, soon became so doubled in petals and so various in colors as to form one of the principal ornaments of the flower-garden, from July to November. The Chinese display a taste in their arrangement of these star-formed flowers, that leaves our florists far in the back-ground. Let imagination, says Phillips, picture a bank sloping to a piece of water, covered with these gay flowers, so dis-

posed that they rival the richest patterns of the carpets of Persia, or the most curious figures in filagree, the artist can devise—see these reflected in the liquid mirror below, and some idea of the enchanting appearance which these brilliant stars are thus made to produce, can be conceived.

When the seed of the China Aster cannot be depended upon, as to what colored flower it may produce, the plants should be kept in a nursery bed until the first flower is expanded sufficiently to ascertain its hue, and then with a transplanting spade they may be removed to such parts of the parterre as we wish to embellish with any particular hue, or to sites where we intend to display the art of grouping colors. These plants should be allowed sufficient room to extend their branches, but at the same time be planted so near each other as to hide the earth, and form but one mass of flowers; and they may be planted on the spot where "spring's earliest visit is paid;" for by the time these annuals require transplanting, most of the early flowering bulbs will have been taken out of the ground.

It is recommended to preserve the seeds from the flowers of the centre or principal stem only, as those on the lateral branches are never so large or so double, and consequently produce inferior plants. The bow of Iris may be imitated by planting these flowers in regular shades; but this must be on a large scale, and sloping ground, or the effect will be trifling. It may be performed in plantations of young shrubs, before they have acquired a size to cover the ground, as the crescent, being interrupted or broken in its progress by the shrubs, will rather add to, instead of lessening the effect. The upper side of the bow should be finished by a line of yellow Marigolds. No flower is so appropriate to plant in abundance in the shubberry as this, as it forms the best contrast with the autumnal tints of shrubs and trees. In floral language, the China Aster is the emblem of VARIETY.

CACTUS TRUNCATA—COMMON CACTUS.

CLASS, ICOSANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, CACTACEÆ.

GEN. CHAR. Calyx, superior, cut in many parts, piled over each other. Petals, numerous, in many series, outer ones smaller. Stigma, many cleft. Fruit, a berry, one-celled, many seeded, umbilicate.
SPEC. CHAR. Branched. Joints, short, oblong, truncated.

The greater number of these plants, observes Lindley, grow in hot, dry and rocky places, where they are exposed for many months of the year to the fiercest beams of a tropical sun, without a possibility of obtaining from the parched and hardened soil, more than the most scanty supply of necessary food. Under such circumstances plants of an ordinary structure would perish; but Cactuses have a special power of resisting heat and drought, and like the camel, they carry with them a supply of water for many, not days, but months. When the soil around is saturated with moisture by the rains, they grow fast, and all the little cavities in their tissue, of which there are countless millions, are filled with liquid nourishment, and they may be literally said to gorge themselves with nourishment. Then when the rains cease, and the air dries up, and the Spirit of the desert reassumes his withering dominion over their climate, Cactuses are in the most robust health, and their cells are filled with provision against scarcity. But now, were they only protected by a thin cuti-

be the inevitable result. Such indeed is the lot of all the gay companions of the Cactus, to whom nature has given no means of enduring the hardships to which their lot exposes them; their leaves rapidly consume the stores deposited in the stems, their stems turn in vain to the roots for a renewed supply, for after but a little while the arid earth has nothing to part with, and then the leaves wither and fall off, the stems shrink up and crack with the dry heat, and the roots themselves, in many cases, follow the same fate. With Cactuses this is different; they have so rough and thick a hide that what liquid substances they contain can only pass through it in minute quantities; the breathing pores of their surface are comparatively few, and so small as to act with extreme slowness when the air is dry; so that in proportion to the aridity of the air, and the heat to which such plants are exposed, is their reluctance to part with the food they contain. They digest and re-digest it, with extreme slowness, and may be truly said to live upon themselves during all those months they cannot feed upon the soil or the atmosphere. The species represented in our plate, belongs to the showy and more thin-skinned of the genus, and consequently these remarks, though they hold good with it, do not apply so particularly as to many of the others; it does not need a minute description, its truncated appearance being about the only distinguishing trait. The handsomest species known is the Speciosissimus, an importation of a recent date, from Brazil, probably the most magnificent species known; the flowers are extremely large, of a bright scarlet color, and remain in bloom some days. We have seen in South America the Cactus Cochinillifer, upon which the insect that gives name to the plant feeds; whole plantations are cultivated purposely to obtain these insects, which always command a ready and profitable sale, as it forms the richest and most durable dye of its color, known. It is the emblem of GRANDEUR.

TRILLIUM PICTUM—PAINTED TRILLIUM.

CLASS, HEXANDRIA; ORDER, TRYGYNIA.

NATURAL ORDER, MELANTHACEÆ.

GEN. CHAR. Calyx, three leaved, inferior, spreading. Corol, three petalled. Styles none. Stigmas three. Three celled, superior, many seeded berry. SPEC. CHAR. Peduncle somewhat erect. Petals, oval, spear-shaped, recurved, twice as long as the calyx. Leaves ovate, taper pointed, roundish at the base, abruptly contracted into a short petiole.

The whole Trillium tribe, to which this plant belongs, may be recognised at once by three marks; in the first place they have no bulbs, but in their stead a solid knob or subterranean stem; secondly, their anthers are turned away from the stigma, splitting, and emitting their pollen on the side next the petals; and lastly, the three carpels out of which the three celled ovary is constructed, are separated at their points, so that there are always three styles instead of one, and these signs, slight as they are, Lindley remarks, are the points in which this poisonous tribe differs from the harmless Asphodels and Lilies. They may appear slight, he observes, and we may wonder why such trifling distinctions should serve to distinguish poisonous from wholesome tribes; but with considerations of the causes of such a fact we have no concern; all that it imports us to know, is that Providence has distinguished them by such minute marks, and has thus provided man with

The plant which is the subject of our article, has been noticed as one of the most curious of our vernal flowers, from the prevalence of the magic number three in all its parts of fructification. It has three styles, three petals, and three leaves on a stem, and is in fact, as Nuttall remarks, the European herb Paris, lacking a fourth part throughout its structure, for in this the number four prevails with as much regularity as the triple quantity in the Trillium. With the exception of one trifling species which has been found in Siberia, the whole genus is exclusively American, and confined to the northern part of the continent. It is perennial.

This plant loves the shade, so placed however that it can enjoy occasional glimpses of the sunshine, and it is to be met with most frequently in our woods, by the sides of mountains, and now and then at the bases of large rocks. The flowers come out in the month of May, and often continue to the middle of June. The blossoms are of a clear white color, serving as a beautiful relief to the stripes of purple at the base; they have a waved, undulate appearance at the edge. With one exception this is the handsomest species of the genus. The flowers of the Nodding Trillium are hid from sight, bending down beneath the bosom of the leaves so as to be sheltered by them; those of the Erect Trillium would equally accommodate the observer by pursuing the same plan, as their dull brown purple color, and offensive smell, do not make them pleasing objects, but the Large Flowering Trillium which sends out in June beautiful white flowers, which undergo a curious and striking change to red, and succeeded by pretty dark purple leaves, which equally adorn the plant, has secured it as the emblem of Modest Beauty, which expression formerly required, in floral language, the union of the Violet and Rose.

SYRINGA VULGARIS—LILAC.

CLASS, DIANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, OLEACEÆ.

GEN. CHAR. Corol, hypo-crateriform. Capsule two celled. SPEC. CHAR. Leaves, ovate, cordate. Branches stiff, white colored.

This is a beautiful ornamental shrub, rising from six to eight feet in height, deciduous in its habits, and bearing in April and May large clusters of fragrant flowers. It is much cultivated in the United States, and there is perhaps no flower of spring whose coming is welcomed as much as this. Of this species there are ten well known varieties. The White and Purple will both graft readily, or inoculate into each other, and we may thus have a shrub one side of which produces purple, and the other side white flowers; these colors may be judiciously varied, so as to present an exceedingly elegant, and withal delicate effect, which sight alone will enable any one to appreciate. It spreads itself rather too rapidly by means of suckers, and from these as much as possible it should be kept clear, if we wish to cultivate it in perfection. Tyas remarks, that the Lilac is consecrated to the FIRST EMOTION OF LOVE, because nothing is more delightful than the sensation it produces on the return of spring. The freshness of its verdure, the pliancy of its tender branches, the abundance of its flowers—

colors, all their qualities summon up those sweet emotions which enrich beauty and impart to youth a divine grace. Albano was unable to blend upon the palette which love had confided to him, colors sufficiently soft and delicate to convey the peculiarly beautiful tints that adorn the human face in early youth; Van Spaendock himself, laid down his pencil in despair, before a bunch of lilac. Nature seems to have aimed to produce massy bunches of these flowers, every part of which should astonish by its delicacy and variety. The gradation of color, from the purple bud to the almost colorless flowers, is the least charm of these beautiful groups, around which the light plays, and produces a thousand shades, which all blending together in the same tint, form that matchless harmony which the painter despairs to imitate and the most indifferent observer delights to behold. What labor has Nature bestowed to create this fragile shrub, which seems only given for the gratification of the senses. What a union of perfume, of freshness, of grace and of delicacy! What variety in detail! What beauty as a whole!

The generic name is derived from the Turkish word that signifies a pipe, on account of the stems of their most costly and favorite pipes being made out of the roots of some of this species. We also borrow our common name for the plant from the east, for LILAC is a Persian word, meaning a flower expressive of admiration, as if we should write flower, with an exclamation point after it.

"The Lilac, various in array, now white,
Now sanguine, and her beauteous head now set,
With purple spikes, pyramidal, as if,
Studious of ornament, yet unresolved
Which hue she most approved, she chose them all."

MAGNOLIA GLAUCA—SMALL MAGNOLIA.

CLASS, POLYANDRIA; ORDER, POLYGYNIA.

NATURAL ORDER, MAGNOLIACEÆ.

GEN. CHAR. Calyx, three leaved. Corol, six or more petalled. Capsules two valved, imbricate, seeds berried, hanging on long cords. SPEC. CHAR. Leaves oval, whitish, green beneath. Petals, egg form, smallest at base.

The whole tribe to which this belongs is celebrated for the elegance of its flowers, the beauty of its foliage, the generally majestic deportment and universal fragrancy that characterize the species. Some of its flowers are fourteen inches in diameter, says Nuttall, and the leaves three feet in length. The same writer observed trees belonging to it of a smooth shaft of ninety feet, before sending off any considerable branches; its spreading top, clothed with deep green leaves, like the Laurel, and enlivened in most seasons by large and fragrant flowers. The species we have selected is more humble than its loftier brethren; it varies in height, from a mere bush to forty-five feet, owing entirely to the soil in which it is placed; as we sometimes see a number of them together, exactly similar in wood, flowers, foliage, and fruit, yet differing as much as we have mentioned in size, and the examination of the ground affording a ready solution.

Under the common names of MAGNOLIA. SWAMP SASSAFRAS.

the Northern, Middle, and Southern States, where it widely extends along the sea coast from the Bay of Massachusetts to East Florida. It is generally seen as a low tree or shrub, with brittle, white, smooth, branches, and covered with laurel like leaves, whitish on their under surface, and rising from amongst this mass of foliage, in the months of May, June, and July, according to its situation, arises a great number of deliciously odorous, cup-shaped, cream colored flowers; the great length of time in which they continue to bloom adding to their value. The perfume may be smelt at a considerable distance, and we are told that a few of them shut up in a room over night communicate to the air a heavy and insupportable odor. The bark has a bitter, aromatic taste, resembling sassafras, which has occasioned the name; and classed it in medicine among the aromatic tonics.

The generic name was given in honor of Professor Magnol, a celebrated botanist of Montpelier in France, and author of some valuable works on that subject. The specific name, from the peculiar whiteness of the leaves, which as the wind blows them causes the tree to be known at a considerable distance. It loves swampy grounds the best, and to make it grow in dry places it must be raised from the seed.

In floral language it is made the emblem of BENEVOLENCE, for as has been remarked, its cream colored flowers, and leaves with a blueish bloom beneath them, are the signs by which Nature points it out to the gatherers of the bark that cures the fevers so frequent in the unhealthy swamps where it delights to grow. It should teach us the lesson that if we improve Nature's gifts, and by patient observation discover her secrets, we will find a remedy for every disease, and be free not only from pain, but all its unpleasant and debilitating consequences.

DIANTHUS CARYOPHYLLUS—CLOVE CARNATION.

CLASS, DECANDRIA; ORDER, DIGYNIA.

NATURAL ORDER, CARYOPHYLLACEÆ.

GEN. CHAR. Calyx cylindric, one leaved, with four scales at the base. Petals five, with claws. Capsules cylindric, one celled. SPEC. CHAR. Calycine scales, cylindric, very short. Petals crenate.

The generic name of this family is derived from two Greek words, meaning divine flower, on account of its preeminent beauty and fragrance. They are all herbaceous evergreens, varying in height from six inches to three or four feet. We are told that one or more species, is native of every country in Europe, one is from Asia, one from Africa, and one from America. Phillips remarks, that these delightful flowers, which next to the Rose are now become favorites with all our florists, have been raised from a small kind of Red Clove Pink, belonging to Europe, some say to England, and evidently like the rest of its species, unknown to the ancients. It was a flower of high estimation at the time of Queen Elizabeth, in England, for we often find it celebrated by the poets of her day; Spenser, who was remarkable for his care in retaining the old manner of spelling, calls them CORONATIONS, probably because they were used on festive occasions, and from hence the name of CARNATION seems a corruption. Some writers are of opinion that they were called Carnation, after a flesh color so dis-

side, suppose the color was so named from the tint of the Carnation flower. The name of clove was given from its perfume being similar to that spice, and the flower on that account, was frequently used to flavor dainty dishes, as well as liquors, and also thought to possess considerable medicinal properties. The perfect Carnation should have a stem, strong, tall, and straight, not less than thirty, nor more than forty-five inches in height; the footstalks supporting each separate flower should be strong, elastic, and of a proportionate length. The flower should be at least three inches in diameter consisting of a great number of large, well formed, petals; but neither so many as to give it a too full and crowded appearance, nor so few as to make it appear too thin and empty. The petals should be long, broad, and substantial, particularly those of the lower or outer circle, commonly called the guard leaves; these should rise perpendicularly about half an inch above the calyx, and then turn off gracefully in a horizontal direction, supporting the interior petals which should gradually decrease as they approach the centre, and altogether forming a convex and nearly hemispherical corolla. Colors perfectly distinct, and disposed in long, narrow, stripes, broadest at the edge of the laminæ, and becoming narrower as they approach the claw. The propagation is by layers and pipings for continuing approved sorts, and by seed for procuring new varieties. The seeds should be sown about the middle of May, in pots filled with compost, with a light mould just sufficient to cover, scattered over them. When six inches high plant them in the garden. Hogg says, if a florist raises six new Carnations in his life time, he may be considered fortunate. When increased by layers, do it when the plants are in full bloom. When placed as ornaments in rooms, a small piece of nitre should be added to the water, and a small piece of the flowerstalk cut off each day, which will prolong their freshness a considerable time. This plant is the emblem of DIGNITY.

AGAVE AMERICANA—AMERICAN CENTURY PLANT.

CLASS, HEXANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, BROMELIACEÆ.

GEN. CHAR. Corol, erect, superior, tube-shaped. Filaments, projecting beyond the corol. Capsule, three-sided, many-seeded. SPEC. CHAR. Stemless. Leaves, toothed, spiny, scape branched. Style of the corolla contracted in the middle. Stem, longer than the corolla.

This plant belongs to the natural order of the Pine Apple, about which we shall treat in another place. Its genus is perhaps the most remarkable, either in the artificial class or natural order, in which it is placed. We have one species growing in the Southern States, the Agave Virginica, which is also stemless; the leaves having cartilaginous serratures, or bound around with a strong, finely toothed margin, different from the substance of the disk. A simple scape rises in September, bearing a yellowish, green colored flower, which is superior, erect, and funnel form. The stamens are also erect, and extend out beyond the corolla, in a prominent manner. The flowers are succeeded by a capsule, which is bluntly triangular and filled with many seeds.

The species represented in our plate, is a native of Mexico; it has acquired the name of Century Plant, or Hundred-year Aloe, from the time it generally requires in order to produce flowers, in

has often been employed to embody the traditions relating to this vegetable phœnix; and there are many sweet gems to tell the fairy-like tale. In its native climate, however, in Sicily, and other warm countries, it is ready to bloom, at the utmost, in a less time than seven years; generally five are sufficient. From its germination until just before flowering, it is a very mean looking plant; presenting us with nothing but a conical leaf bud on a large scale, which is constantly unfolding, and displaying the thick and fleshy leaves, which are pointed, and beset on their margins with strong thorns; this process, always going on, produces at length an exceedingly large sized bunch of leaves, which are enormously developed. This continues for some time, when at last the outer leaves begin to shrivel and look paler than usual; the bulk of the mass in the meanwhile, steadily and rapidly augmenting; those acquainted with its habits are aware that nature is now making preparations for flowering. With incredible rapidity a central stalk, or scapus, from twenty to thirty feet in height, is shot up, which sends out numerous clustered branches, well compared to a huge chandelier, bearing from three to seven thousand elegant, greenish yellow flowers, graciously scattering showers of deliciously perfumed honey. Its energies are exhausted, like the phœnix it sends up offsetts from the root, to perpetuate its species, and no matter how long it has previously existed, perishes at once. Just when it is ready to flower, the Mexicans tap it and take away the abundant juice from the MAGUI; they procure several gallons at a time; this is fermented, and from it is distilled the common spirit drunk throughout the country; when they finally exhaust it in this way, they make a durable flax out of its tenacious fibres. The Mussulman having performed the pilgrimage which must be performed once in his life-time, places a branch of this tree before his door, which, as he thinks, like him, but once in its life produces any thing worthy of Paradise; it has hence been made the emblem of RELIGIOUS SUPERSTITION.

Cactus. Flagelliformis.

LITH. OF LEWIS & BROWN. 272 PEARL ST. N.Y.

CACTUS FLAGELLIFORMIS—CREEPING CEREUS.

CLASS, ICOSANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, CACTACEÆ.

GEN. CHAR. Calyx, superior, cut in many parts, piled over each other. Petals, numerous, in many series, outer ones, smaller. Stigma many cleft. Fruit, a berry, one celled, many seeded, umbilicate. SPEC. CHAR. Creeping, rooting, hispid; with ten angles.

Lindley remarks, that these plants from the profusion of large, richly colored flowers, with which their species are loaded, have given the conservatories an air of magnificence which was quite unknown till they were introduced. The species are in all cases succulent, and with the exception of the Pereskias, destitute of leaves, in whose room the stem is either green, or leaf like, or, at least, covered over with a green integument, which has the structure of the pulpy part of a leaf, and like it executes the office of respiration. They are all destitute of true leaves, except when they are just beginning to grow. Just at that time they do indeed produce little succulent bodies, which we know to be rudiments of of leaves; but such parts drop off soon after they germinate, and the only representatives they leave behind are the stiff, hooked, spines, with which so many species are covered. The parts which are mistaken for leaves in the Indian Fig, or some of the more common species of Cereus, are only the flattened joints of the stem.

The properties which Cactuses possess, of living where few other plants can exist, sometimes renders them of great utility to man. The Editor has seen them, in some of the islands of the Caribbean Sea, prove eminently serviceable, at a time when nothing else would flourish, and prepare the ground for other plants, when sufficient rain would fall to allow those plants to vegetate. We are told that on Mt. Etna, the Sicilians employ the same plan to render such desolate regions susceptible of cultivation. The Indian Fig, readily strikes into the fissures of the lava, and soon, by extending the ramifications of its roots into every crevice of the stone, and bursting the largest blocks asunder by its gradual increase, makes it capable of being worked; and still more useful, they sell the cooling fruits it produces, in considerable quantities, and some of the varieties of which are considered to be of great excellence.

The generic name is taken from the Greek, being used by one of their writers to signify an unknown, spiny plant, which was eatable, and therefore considered to apply to some of the species of this genus.

Our species, the Creeping Cereus, has a roundish, somewhat angular stem, generally about ten distinct angles, which is not strong enough to support itself erect, and consequently weak and trailing, and might, as a writer remarks, be taken, from its long branches, for the tails of some animals, were it not for the gay colored flowers these apparent tails push out from time to time. The flower is of a beautiful rose color, varying little from a fine, deep red, and continues for a long time in blossom, both day and night. The whole plant is closely beset with spiny bristles, making rough and careless handling rather dangerous. From its very easy cultivation, it is perhaps the best known of all the Cactus tribe in the north, except the Prickly Pear, which grows wild as far north as the Hudson, and is to be seen in all our [illegible] GENUS.

No. 1. Tab. 1

VIOLA TRICOLOR—PANSY.

CLASS, PENTANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, VIOLACEÆ.

GEN. CHAR. Calyx, five leaved. Corolla, five petalled, irregular, horned at the back. Anthers cohering. Capsules superior, one celled, one valved. SPEC. CHAR. Stem angular, divided. Leaves oblong, deeply scolloped. Stipules lyre shaped.

We have many sweet species of Violet in the United States, but this beautiful and well known exotic excels them all. Its variable tints, it has been remarked, are scarce less numerous than the names that have been bestowed upon it. That of Pansy is a corruption of the French name *pensée*, though in floral language it is adopted by them as the FORGET-ME-NOT. Nature sports as much with the colors of this little flower as she does with the features of the human countenance, and you may as well seek for two faces alike, as hunt for Pansies of the same tint. The most brilliant, purples of the artist, appear dull when compared to that of the Pansy, our richest satins and velvets, coarse and unsightly by a comparison of texture; and as to delicacy of shading, it is scarcely surpassed by the bow of Iris itself. When seen individually the flower must be noticed with admiration, yet it is not calculated to make a figure in the garden unless planted in large clumps; but when a considerable plot of rising ground is covered with these flowers, the appearance cannot be equalled by the finest artificers

in purple and gold. The seeds may be sown at almost any season of the year. Those sown late in the autumn blossom early, whilst those sown in the spring, flower during the summer. It is a flower that bears transplanting; and if the branches are cut off when the beauty of the blossom is past, they will send out fresh branches, and continue to flower throughout the year; but when suffered to ripen the seed the plant generally dies. The plants have been frequently kept alive by this treatment, and transplanting rather adds to their beauty than otherwise. It will grow in any soil and situation, but the self grown plants degenerate very rapidly, producing only small, dingy, flowers. The perfume is too weak when singly taken; but a cluster of the blossoms gives out an agreeable fragrance. It is a native of most parts of Europe. This flower was held in such high estimation by the ancients that one of the prizes of the Floral games consisted of a Golden Violet, and we are told in their fables, that Io, the daughter of Atlas, fleeing into the woods from the pursuit of Apollo, was through the power of Diana, changed into a Violet, which still retains the bashful timidity of the nymph, by partially concealing itself from the gaze of Phœbus in its foliage. It was the study of the Violet which induced John Bertram, a quaker of Pennsylvania, to study plants. He had employed his time in agricultural pursuits, without a knowledge of Botany, but being in the field one day, he gathered a Violet and examined its formation, and reflected upon it, until he became so prepossessed with the flower, that he dreamed of it. This circumstance inspired him with a desire of becoming acquainted with plants; he therefore learned for this purpose as much Latin as was necessary, and soon became the most learned Botanist of the New World.

Pirus communis

PYRUS COMMUNIS—PEAR TREE.

CLASS, ICOSANDRIA; ORDER, DI PENTAGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx, five cleft. Petals, five. Pome, inferior, five celled, many seeded. SPEC. CHAR. Leaves, ovate, serrate. Peduncles, corymbed.

This tree is a native of Europe, in every part of which it will grow spontaneously, under the fifty-first parallel of North Latitude. It succeeds well, to the great satisfaction of the agriculturist, in the orchards of the United States; and is relied upon to flourish wherever its neighbour the apple will grow. In a wild state its branches are covered with thorns, but cultivation softens its nature and turns the rough savage into a useful citizen, and the sap that nourished its warlike equipment now is used in ripening rich and delicious fruit. This well known and extensively cultivated tree, which is said to be thoroughly naturalized to the New England soil, is of an elegant, pyramidal form, with obtuse leaves, of a longish, oval shape, and minutely sawed around the whole margin. The flowers, which are of a whitish red, sometimes each color separately, come out in May, and are produced on the short spurs of former years. The fruit is shaped very much like a decanter, roundish and globular below and tapering to a narrow neck above; this is its general form, but there are some varieties that are very nearly globular, others again the reverse and more cylindrical.

The germs of the Pear tree have a distinguishing characteristic, differing from the Apple in a much less disposition to emit suckers; that is when obstructed or bruised the irritation is less likely to be sufficient to develope the embryo and cause the sprouting of a fresh branch. It lives much longer than the Apple. The good pear is known by its tender and liquifying pulp, melting as it were in the mouth, plenty of juice and that of a sweet, slightly spicy, flavor; not too much of this last, as that would make it as it often does, quite unpleasant; the crisp and breaking pear is another fine variety.

The generic name is derived from the Celtic, from which the Latins adopted it; some consider the meaning of its original derivation to be *fire*, others dispute this very strongly. The specific name means *common*, and is of course unimportant. There are few tribes of plants that bear cultivation as well as this, indeed without it, it would be almost valueless; but properly grafted and well trained, the gardener receives a rich return for all his labors. There are few species of Pears, but their varieties amply compensate for this, being almost innumerable. The Romans had only thirty-six varieties of the Pear, but in modern days, by some experiments, two gentlemen in France, produced over eight hundred varieties worth cultivation.

Pears to our knowledge have no medical properties, being used principally for the table. The timber is valuable, heavy, compact, and close grained, taking a fine polish, and when stained black, resembling ebony; it is consequently much employed in the manufacture of tool handles, and sometimes boxes. When we mention that the leaves will give a good yellow dye, we have enumerated all its properties. It is the emblem of COMFORT.

CONVALLARIA MAJALIS—LILY OF THE VALLEY.

CLASS, HEXANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, SMILACEÆ.

GEN. CHAR. Corol, inferior, six cleft. Berry, round, three celled, spotted before it ripens. SPEC. CHAR. Flowers, on a scape.

This is a much admired perennial plant, bearing delicate, white flowers, in May and June, with recurved segments and very fragrant. The stalk that rises from above the leaf to support the flower, is semi-cylindrical. It has two oval, lance-shaped, leaves, that spring from the root. The flowers come out in that form called a raceme, which may be seen in our plate; they are drooping and of a globe bell shape. The generic name is derived from *Convallis*, a valley, for it grows spontaneously in such places when shady. Phillips remarks, that the graceful manner in which these perfumed bells are suspended on the stem, and the agreeable contrast which their broad leaves, of bright green, afford to the snowy corollas, could not escape the notice of the poets. The proper situation for this plant in the garden is the most rural and rustic part, where it is partially shaded by shrubs and trees; and it flowers even better in a north aspect than when fully exposed to the noon day sun. It will grow in almost any situation, but it produces most flowers in a loose, sandy, soil that is rather poor than otherwise; for when planted in a rich garden mould, the roots

spread and multiply rapidly, but the plants give very few flowers, and like most other creeping, rooted, plants, it seldom produces seed when it can propagate itself so readily by the nature of its roots. From this economy of nature an observing gardener will be taught to transplant many kinds of his fruit trees into poorer soil, when the richness of the earth forces the tree too rapidly to form its fruit. The autumn is the proper season for placing these perennial roots in the ground, where they should be covered with about two inches of earth, and not be disturbed oftener than every third or fourth year, as they seldom flower strong or plentifully after being removed. The plants will require no other attention than that of keeping them free from weeds, and trimming the roots about once in three or four years, according to the nature of the soil and increase of the plants. The Lily of the Valley, is one of the few flowers that bears forcing in pots, and as but few plants are more agreeable for the house in the months of March and April, it should never be omitted wherever there is an opportunity of doing it. The flowers possess not only an agreeable odor, but also a fragrance that is refreshing and highly medicinal against certain affections and many diseases of the head. The water distilled from these little corollas was formerly in such great repute, that it was kept only in vessels of gold and silver, and was called AQUA AUREA, golden water. It is common in Germany to make a wine of the flowers, by drying them in the summer, and in the time of vintage mixing them with the grapes when pressed, and when fermented they use this wine in various diseases. Amongst the varieties is the white with double flowers, the single and double red, and a sort with larger corollas, variegated with purple. It is made the emblem of a RETURN OF HAPPINESS, because it announces, by its elegance and odor, the happy season of the year.

BROMELIA ANANAS—PINE APPLE.

CLASS, HEXANDRIA; ORDER, MONOGYNIA.

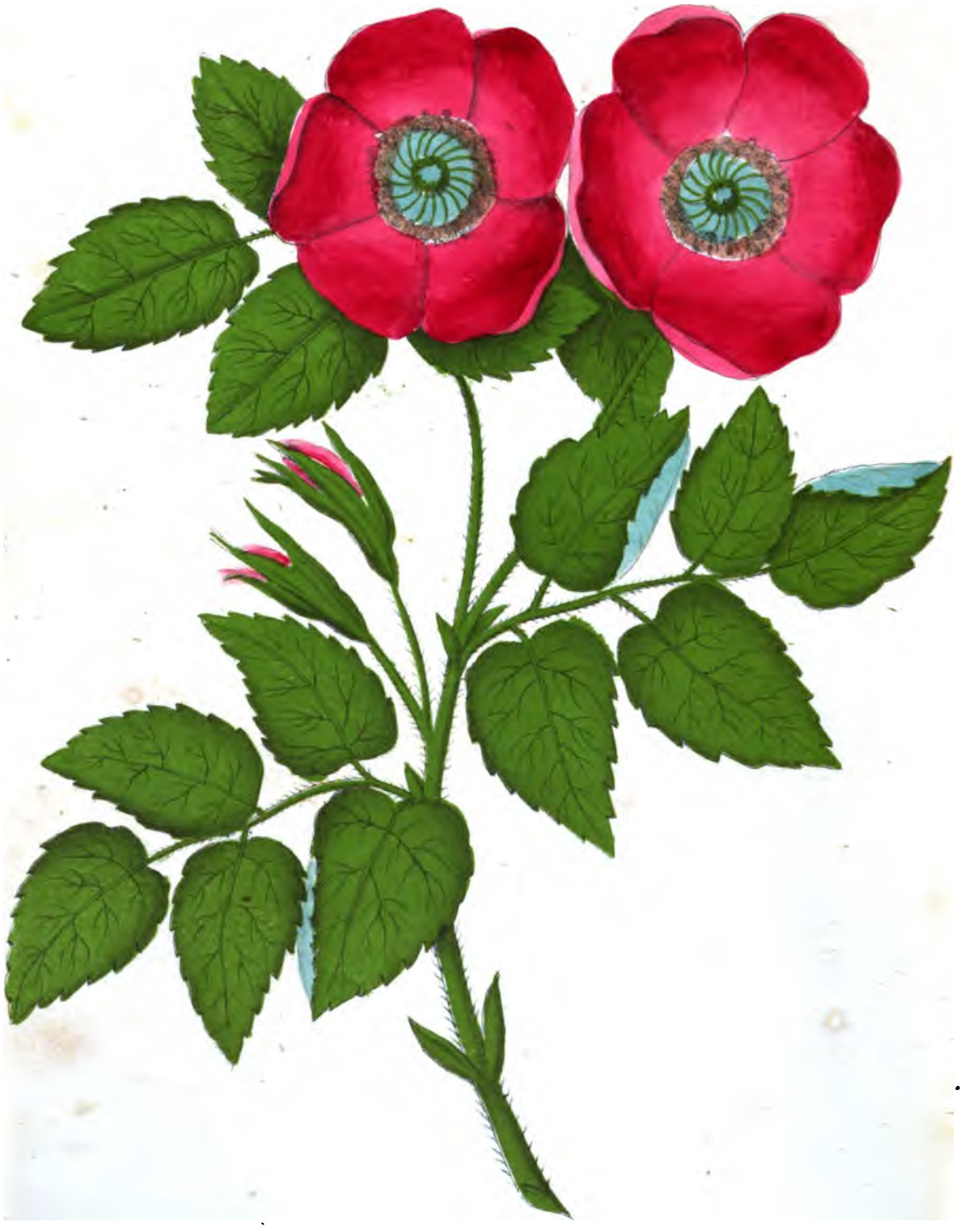
NATURAL ORDER, BROMELIACEÆ.

GEN. CHAR. Calyx, tripid. Petals, three, a honey bearing scale at the base of each petal. Berry, three celled. SPEC. CHAR. Leaves, fringed with spines, mucronate. Spike comose.

This is the type of a natural order of American plants chiefly belonging to tropical regions. The leaves are sheathing, usually springing from the root. A perianth of three sepals and three petals, and six stamens, varying in point of insertion. Germen simple, with one style, and a three cleft stigma. Three celled and three valved fruit; the seeds with mealy albumen.

Linnæus named this genus after a countryman of his, Olaus Bromel, the author of several botanical works. It is a native of Brazil, Peru, and Mexico; and is now universally diffused over the civilized world. It flourishes in Europe, as far north as Naples, when unprotected, and in America in the Bermudas. Loudon considers it a much more hardy plant than we generally imagine, and says, it will bear degrees of heat and cold which would destroy the foliage of both the vine and grape in a state of vegetation. We are told that the Peruvians, among whom the Europeans first found it, called it NANAS, and from hence was derived the European name Ananas. There are upwards of twenty species of this tree, and a great number of varieties.

Our species, represented in the plate, is an herbaceous, perennial plant, from three to six feet in height. The leaves, which spring from the root, are of a leathery consistence, deeply channelled, and of a long, narrow shape, furnished with spines or prickles on the edges, thus presenting us with the idea of a regiment of soldiers armed with sharp spears, to protect the precious fruit within. Within this protecting array rises the scape or flower stem from the root. On this scape as on an axis spring forth a number of sessile flowers, which after the process of fructification is completed, produce soft, fleshy fruits, which lying so near each other become crowded, and at last joined together, the small protuberances on the surface being the only traces of their ever having existed separately. The scape terminates in a crown of leaves, which surmounts the whole. This agglomerated fruit bears some resemblance to pine cones. For richness of flavor the fruit is considered as unrivalled, its flavor having been described like that of strawberries mixed with wine and sugar. We are told that the White Providence variety, weighs from six to fourteen pounds. It is propagated by seeds when new varieties are required; but cultivation tends to diminish these so completely, that as a general rule they entirely fail, and the plant can be propagated only by the crown or suckers. Cultivators should remember that it requires much heat and moisture. Tyas in giving the Pine Apple the emblem of YOU ARE PERFECT, remarks; the fruit of this plant, surrounded by its beautiful leaves, and surmounted by a crown in which the germ of a plant is concealed, seems as though it were sculptured in massy gold. It is so beautiful that it appears to be made to please the eyes, so delicious, that it emits the various flavors of our best fruits, and so oderiferous, that we should cultivate it, if it were only for its perfume.



ROSA RUBIGINOSA—EGLANTINE.

CLASS, ICOSANDRIA ; ORDER, POLYGYNIA.

NATURAL ORDER, ROSACEÆ.

GEN. CHAR. Calyx, pitcher-shaped, five cleft, fleshy, contracted at the neck. Petals, five. Seeds, very many, hispid, fastened to the inner side of the calyx. SPEC. CHAR. Germ, egg-shaped. Leaf and flower stalks, glandular, hispid. Stem, glabrous. Prickles, scattered. Leaflets, five or seven, ovate, minutely cut on the margin, sub-glandular beneath.

The specific name of this plant is derived from a word meaning rusty, on account of the rough appearance of the under side of the leaves. It is common in the United States, where it is known as the WILD BRIAR ROSE, SWEET BRIAR AND HEP TREE. This universal favorite of the poets, whose breath Dryden thought could relieve any degree of sickness, exhales a pleasing and powerful perfume, which is more intense in the morning than at any other time; the dew seeming to excite the odorous secretion. The little factories or glands for the manufacture of its essential oil, to which of course its fragrance is owing, are diffused not only in the flowers but leaves, so that all parts are highly scented. It has a branching stem, strongly armed with prickles, rising to the height of three or four feet, as we generally see it in a sandy or rocky situation; but transferred to a rich garden soil and carefully cultivated, the thorns rapidly

diminish, it becomes less branching and more erect, the flowers, in common with all cultivated ones, change their threads or filaments into blossom leaves, the whole increasing in size, and the plant altered in every respect vies in beauty and portliness with any thing in our shrubberies.

Its sweet red, sometimes beautifully shaded with clear white flowers, make their appearance in the months of June and July, and these are succeeded in the autumn by the scarlet, egg-shaped, berries, sometimes rough, but more often smooth and shining, and which continue during the winter as valuable an ornament, according to the opinion of some, at that season as at any other. As we have mentioned, it is generally found in rocky and dry, sandy grounds, sometimes in the fields and by the road sides. In floral language it is the emblem of GENIUS, from the beauty and fragrance of its flower, and the long continuance as well as equal beauty of its fruit. Wordsworth, makes it say to the waterfall;

"You stirred me on my rocky bed,
What pleasure through my veins you spread,
The summer long from day to day.
When spring came on, with bud and bell,
Among these rocks did I,
Before you hang my wreaths, to tell,
That gentle days were nigh.
And in the sultry summer hours,
I sheltered you with leaves and flowers,
Though now of leaf and flower bereft,
Some ornaments to me are left;
Rich store of scarlet hips is mine,
With which I in my humble way,
Would deck you many a winter's day,
A happy eglantine."

PELARGONIUM QUERCIFOLIUM—OAK-LEAVED GERANIUM.

CLASS, MONADELPHIA; ORDER, HEPTANDRIA.

NATURAL ORDER, GERANIACEÆ.

GEN. CHAR. Calyx, five parted, upper divisions much the broadest, terminating in a funnel-shaped, capillary nectary. Corol, five petalled, irregular, upper petals very showy, broader than the lower, and covered with colored veins. Arils, five, each one seeded and awned. Anthers, seven. SPEC. CHAR. Umbels, sub-many-flowered. Leaves, simulating the oak. Filaments, ascending at the apex.

In the description of the Geranium Robertianium, we reviewed the prominent characteristics of this natural and exceedingly beautiful order. This as well as the most of our conservatory species, is a native of the Cape of Good Hope. This geranium will show the celebrated spiral air vessels to very good advantage; and those who are curious to witness the secret workings of vegetation will find much to learn and admire in its structure. For this purpose, place one of the petals upon a piece of perfectly smooth and flat glass, such as is usually furnished for the transparent stage of a microscope, wet it with water, and then lay over it another flat piece of glass. Press the two firmly together, and by degrees all the air will be squeezed out of the petals and it will become transparent. With a good magnifying power all the air vessels of the veins may be distinctly observed, looking

It has been well remarked, that this race of plants wants but a greater capability of endurance to the cold, to make them the most valuable as well as confessedly the finest productions of the vegetable kingdom. Unfortunately none of them will endure the frost; all have perished upon which the experiments for the purpose of naturalizing them were tried, and in despite of the most persevering and trying effort, they remain as they were at first, Greenhouse plants. They are easily propagated by cuttings from any part of the plant, whether from the old woods or new; placing these in a pot filled with moderately moist earth will ensure their sprouting. The only geranium possessed of much medicinal properties, is the G. Maculatum, or Crane's bill geranium, which is indigenous to the United States, and the purple colored flowers of which are too well known to need description; its root is a highly valuable astringent. Most of the whole species are in perpetual leaf; the remainder die to the ground and come up annually, to flower and produce seed. This plant emblemizes ART, from its faculty of imitation. In it the student of chemistry, as Phillips remarks, will see how imperfect is his art in comparison with natural chemistry, which distils from the earth and conveys by distinct channels, in its small stems, all that is necessary to produce foliage, flowers, and fruit, together with color, smell, and taste, the most opposite fluids and liquids being separated only by divisions so small as scarcely to be deemed a substance. And the research into the wonders of this, as well as every other species of vegetation, may be entered into without hurting the sensibility of the most tender feeling, as plants and roots may be dissected without those disagreeable sensations, which follow the dissection of animals.

"Each secret spring, each organ let me trace,
That mock the proudest arts of human race;
Completest toil from endless source that rose,

ÆSCULUS HIPPOCASTÆNUM—HORSE CHESNUT.

CLASS, HEPTANDRIA; ORDER, MONOGYNIA.

NATURAL ORDER, HIPPOCASTANACEÆ.

GEN. CHAR. Calyx, swelled, four or five toothed. Corol, correspondingly, four or five petalled, inserted on the former, unequal, and downy. Capsule, three celled. Seeds, large solitary. SPEC. CHAR. Leaves, digitate, with seven divisions. Corol, five petalled, spreading.

This magnificent, tree as Tyas remarks, was originally brought from India, and has been naturalized in Europe for more than two centuries; in America not quite so long, as it took quite a circuitous mode of reaching us, by way of Constantinople, Vienna, Italy, France, and England. It gives the deepest and most solemn shade of any tree that is yet known, and for this purpose, as well as its extreme cleanliness and rapidity of growth, is much used in parks, avenues, streets, and to shade houses. It luxuriates in the Tuilleries in France, where it rises around the great basin in masses of incomparable beauty, and at the Luxembourg, spreads its branches in accordant pomp and splendor. It can easily be distinguished from other trees by its magnificence of size and form, were not the five or seven leaves it bears on each footstalk, spread out like a human hand, a sufficient distinction. Its blossom is certainly one of the most splendid and elegant produced by any timber tree in the country. When in full flower, its delicate spikes

of white and pink, and the deep green of its digitated leaves, make it look like a mountain of ivory and emeralds, but this effect soon gives place to its shadowy depth of coloring. In the beginning of spring, one rainy day is sufficient to cause this beautiful tree to cover itself with verdure. If it be planted alone, nothing surpasses the elegance of its stately pyramid of from fifty to sixty feet, the beauty of its foliage, or the richness of its flowers, which in May or June, make it appear like an immense lustre or chandelier all covered with pearls. Fond of ostentation and richness, it covers with flowers the grass it overshadows and yields to the idler a most delightful shade. The nuts and capsules are large, mahogany colored, and are in great request among the rising generation, in the construction of potato mills. Though they yield a fine starch, still not in sufficient quantity to make it an object in the cultivation of the tree. In our western states, they have been successfully used to poison fish. Taken as a whole they rank in the merely ornamental class, for though cattle, especially the Deer, eat the nuts with avidity, to man they are acrid and unpalatable, evidently not intended for his food. The timber is of little service, being soft and perishable. The bark it is said is of some service in tanning, and the nuts, besides the properties we have named, have a soapy quality, which the peasants in some countries employ advantageously. Its generic name is derived from Esculus, a tree which furnished the Romans with an eatable fruit. The specific name meaning Horse Chesnut, was given because the Turks grind the nuts and mix them with corn, for their steeds. It is the emblem of LUXURY.

"There avenues of chesnuts high,
With vaulted roofs conceal the sky."

DIGITALIS PURPUREA—FOXGLOVE.

CLASS, DIDYNAMIA; ORDER, ANGIOSPERMIA.

NATURAL ORDER, SCROPHULARIACEÆ.

GEN. CHAR. Calyx, five parted. Corol, bell form, five cleft, ventricose. Capsule, egg shaped, two celled. SPEC. CHAR. Sepals, ovate, acute. Corol, obtuse, superior lip entire. Leaves rough and somewhat spear-shaped.

This genus contains many species, not one of which is American. The generic name is derived from a word signifying thimble, in allusion to the form of the flowers. Its common name is a corruption of Fairy's Thimble. This biennial plant is a native of the mountainous and sandy regions of Europe. It has a simple stem, leafy below, covered with light down, which induced the poets to make it the emblem of YOUTH. The leaves are alternate, of an oval, spear-shape, those from the root attaining a considerable size. It flowers on a spike. Its corolla, says Lindley, is a large, inflated body, with its throat spotted with rich purple, and its border divided obliquely into five very short lobes, of which the two upper are the smaller; its four stamens are of unequal length; and the style divided into two lobes at the upper end. A number of long, glandular hairs cover the ovary, which contains two cells and a great quantity of valves.

Phillips remarks, that this beautiful but deleterious plant, which so highly ornaments the banks of hedge-rows and borders of woods, has been taken into the pleasure grounds to embellish the

shrubbery by its noble spikes of pendant flowers, which hang with such peculiar grace from the spiral branches that they may be compared to a tower of Chinese bells, balanced for the pleasure of the Zephyrs. When these flowers advance from the calyx, they are scarcely closed at the end by the four clefts of the corolla, which meet so exactly as to prevent the admission of air until the parts of fructification have arrived at maturity, at which period the lips of the flower burst open in a bell or trumpet shape, displaying the most beautiful leopard spots in the interior of the flower. In this state the corolla remains for some days, until the anthers have discharged their farina, when the mask drops off that the sun may more readily ripen the seed vessels; but as fresh flowers continue to open in a regular succession, upwards, from the month of June to September, the beauty of the plant is continued for a longer period than most other towering flowers.

The covering of the parts of fructification, reminds us of Flint's remarks, in relation to similar cases. Nature, says he, is always modest, and when the mystery is accomplished and the flower cup fecundated, the peduncle that sustains the flower turns up again towards the sky. Its bower of love was concealed; but it shows the cradle of its children.

The leaves of this plant have a nauseous, bitter taste, but uncommon scent; when dried their color should be of a lively green; a fortunate test of the care used in the process, as this plant is now coming into extensive use. When given in large doses, it has the remarkable property of almost instantly reducing the action of the heart, lowering the pulse from seventy beats in a minute to thirty, and even twenty-five; and that too without previously exciting it. There is a variety with white corollas, to be seen sometimes in the gardens, which may be obtained by retaining the seeds of the common Foxglove a year without sowing them. Cowley ——

LILIUM CANADENSE—COMMON YELLOW LILY.

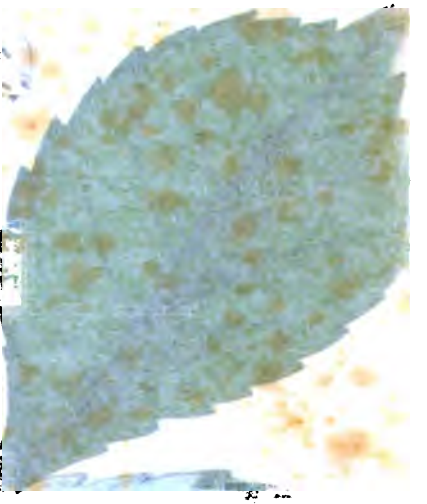
CLASS, HEXANDRIA ; ORDER, MONOGYNIA.

NATURAL ORDER, LILIACEÆ.

GEN. CHAR. Corolla, six petalled, bell-shaped; with a longitudinal, nectarious line. Capsules, the valves connected by cancelled hair. SPEC. CHAR. Leaves in whorls. Flowers, terminal, drooping, with open petals.

The whole Lily tribe is readily distinguished by the large size of its flowers, some specimens of which are very striking in this respect. Dr. Wallich tells us of the gigantic Lilies of Napal, one species of which grows ten feet high, with flowers large in proportion. During the months of June and July, and sometimes until the middle of August, the larger portion of our meadows and waste moist lands, are ornamented with this flower. It has a green stem, rising to the height of from fifteen to forty inches, with lance-shaped leaves, surrounding it in whorls. Many times this stem bears but a single flower, though most generally three, on the stem; their bells hang pendulous, of a yellow color on the outside, but spotted within; the petals a very little turned outwards. It is perennial in its duration. The beauty and delicacy of the Lily, Phillips remarks, has made it celebrated by the writers of all ages, from the time of Solomon to the present day. It was regarded by Christ himself, as being more splendid than the great King of Jerusalem in all his gorgeous apparel, and on this account, we

cannot behold the Lily without feeling a kind of reverence for the flower, mixed with our admiration for its elegance of form and purity of color. Jupiter wishing to render Hercules immortal, that he might rank him among the divinities, prevailed on Juno to take a deep draught of nectar, prepared as we presume by Somnus, as it is related that the Queen of the Gods fell immediately into a profound slumber, and that Jupiter then placed the infant Hercules to her breast, in order that the divine milk might enter his frame and so cause his immortality. The infant enjoying the delights of the celestial breast, drew the milk faster than he could swallow, some drops of which therefore fell to the earth, from which this flower immediately sprang up; and from this fable it was called Juno's Rose. Alcaib tells us, in his celebrated and elegant emblems, that Celestial Beauty is represented surrounded by a glory, half of the head hidden in the clouds, holding a Lily in one hand and a compass and ball in the other. As all nations agree in making the Lily the symbol of PURITY and MODESTY, it is the fit attribute of beauty; and perhaps no inhabitants of the earth blend it so happily with the Rose as our own fair daughters. In the Hebrew language, the name Susannah signifies a Lily. The English name is derived from the Latin, as is also the French LIS, the Spanish LIRIO, the German LILIE, the Italian GIGLIO, and the Dutch GILGEN, seem to be corruptions of the same word. The Lily genus appears to have been as great favorites with the ancient as the modern nations; in the wedding ceremonies of the modern Greeks, the priest is supplied with two chaplets of Lilies and ears of corn, which he places on the heads of the bride and bridegroom, as emblems of PURITY and ABUNDANCE. As the Canadian Lily is one of our own flowers, and not improved by cultivation, directions for that purpose would be unnecessary.



DAHLIA SUPERFLUA—DAHLIA.

CLASS, SYNGENESIA; ORDER, POLYGAMIA SUPERFLUA.

NATURAL ORDER, COMPOSITÆ.

GEN. CHAR. Root, tuberous. Leaves, broad, lanceolate, cut on the edges. SPEC. CHAR. Generally six feet in height, with broad foliage and large flowers. Rays fertile.

The generic name of this plant was bestowed by Linnæus in honor of Andrew Dahl, a Swedish botanist. It contains few species, but such has been its reception by the public, that gardeners have bestowed an immense amount of pains in its cultivation, and the varieties produced in consequence, are almost endless. Phillips remarks, that this splendid addition to the autumnal parterres of the Old World was unknown till 1789, when it was sent to Spain from Mexico, where it grows wild, in sandy meadows. It was lost at first in England, but some roots and seeds being afterwards obtained from France, that country partook of the Dahlia-mania of the nineteenth century, which although less dangerous in its effects, was not less general than the Tulip-mania by which Europe was so much affected in the seventeenth century; and it was finally left to English capital and perseverance to illuminate the northern part of the globe, by the full brilliancy of these floral luminaries, which now shine as conspicuously in our groves and gardens as gas in our cities. The ingenuity of the florist has never appeared more conspicuous than in the treatment

of this Mexican plant, as through their art, these flowers have had their petals doubled and quadrupled until they have become as full as the China Aster or Rosa Centifolia, whilst their colors have even been more increased than their petals, and display a richness which rivals that of the gaudy Tulip, or the finest tints which the silk dyer is able to give to glossy velvet. The most beautiful varieties have been raised from the seeds of the single purple Dahlia; these are increased by two different modes; First, by cuttings, which should be taken from the rootshoots in the spring, or from young shoots in the early part of the summer, these when cut off smoothly, in the middle of a joint, are to be planted in light sandy earth on a moderately hot bed, and covered with glasses. The top leaves of the cuttings should be removed when planted; tubers will thus be formed, which will produce flowers during autumn. The second mode is by grafting the shoots of valuable plants on the tubers of the more common kind.

Dahlias should be planted in open situations and in a rich loamy soil; the full grown roots to be put in the ground early in spring, at the place where they are to flower. The most admired are those which throw out their branches like a shrub, and are prolific of flowers, having short footstalks; the blossom should be clear, distinct in color and fully expanded. In examining the florets of this species, it will be seen that the filaments of the stamens are elastic, which by extension admit of the anther being protruded above the floret, by the impulse of the stigmas from within; as charged with pollen they advance to their station through its five valved membrane, which opposes their outlet at the summit, withdrawing the same to its place when these have passed. The roots, which are tuberous, resembling a sweet potato, are used as an aliment by the Mexicans; these should be taken up in October, and preserved through the winter in boxes of dry sand, placed where the frost cannot penetrate. Dahlias have the best appearance when planted on lawns, forming clumps distinct from any

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